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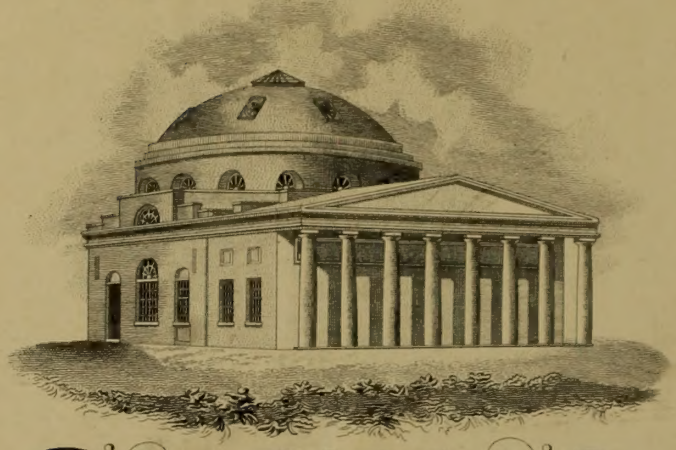

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Early Doctor of Medicine and Doctor of Physic Dissertations 1813-1897
Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1897. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were: Richard J. Stoltz, Historical Library/Preservation Officer; Maria Millagros Fuster, Metadata Management Librarian; Angela Cochrane and Carol Hedinger-Berry, Processing Divisions; Sarah Hunter, Scholar and Megan Wolff, Serials Cataloging.

These dissertations were digitized in 2011-2012 and are available at the UM Digital Archive (archive.lib.umaryland.edu) and the Internet Archive (www.archive.org).

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

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(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1847, 1850 (a)

Author	Title	Year
Revell, William	Typhus Fever	1847
Mitchell, Lemuel P.	Gastritis, Acute and Chronic	1847
Kinkle, J.C.	Habit of Constipation	1847
Matthews, Alexander	Pneumonia	1847
Chapman, John S.	Inflammation	1847
Dougherty, Bernard A.	Pneumonia	1847
Mackall, Richard	Cold	1847
Pierce, W. Allen	Tetanus	1847
Smith, Thomas H.L.	Dysentery	1847
Laroque, Alfred	Chlorosis	1847
Bosley, Grafton M.	Sequalae of Malarious Fevers	1847
Marmillion, Edmond B.	Pneumonia	1847
Reindollar, William	Abortion	1847
Marcy, Virgil M.D.	Intermittent Fever	1847
Doyle, John A.	Neuralgia	1847
Boulden, James E. Porter	Revulsion	1850
Gilbert, George M.	Opium	1847
Dyson, Robert	Chemistry	1847

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Author	Title	Year
Turner, James H.	Inflammation	1847
Ward, Warren W.	Acute Gastritis	1847
Wilkins, Joseph	Necrosis	1847
Morris, Louis White	Laryngitis	1847

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UNIVERSITY OF MARYLAND

THESES

1847, 1850(a)

Revell, ~~Wm.~~ William T.	Typhus Fever	20p.
Mitchell, ~~Jas. T.~~ LEMUEL P.	Gastritis, Acute and Chronic	19p.
Kinkle, J. C.	Habit of Constipation	54p.
Matthews, Alexander	Pneumonia	32p.
Chapman, John S.	Inflammation	21p.
Dougherty, Bernard A.	Pneumonia	39p.
~~Markall~~ MACKALL, Richard C.	Cold	17p.
Pierce, W. Allen	Tetanus	28p.
Smith, Thomas H. L.	Dysentery	19p.
Laroque, Alfred	Chlorosis	18p.
Bosley, Grafton M.	Sequalae of Malarious Fevers	27p.
Marmillion, Edmond B.	Pneumonia	22p.
Reindollar, ~~Wm.~~ William	Abortion	28p.
Marcy, ~~V.~~ Virgil M. D.	Intermittent Fever	20p.
Doyle, John A.	Neuralgia	28p.
Boulden, ~~J.~~ James E. Porter	~~Inaugural Dissertation~~ Revulsion 1850	34p.
Gilbert, George M.	Opium	25p.
Dyson, Robert	Chemistry	19p.
Turner, James H.	Inflammation	25p.
Ward, Warren W.	Acute Gastritis	16p.
Wilkins, Joseph	Necrosis	21p.

32

21
R.U5

(2)

Morris, Louis ~~W.~~ White Laryngitis 20p.

32

An

Inaugural Dissertation

On Typhus Fever

Respectfully submitted for Examination

To the

Provost Regents & Faculty of Physic

Of the

University of Maryland

For the Degree of Doctor of Medicine

By

William Theodore Revell

1847

18887

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Typhoid Fever.

Since typhoid is usually preceded by a period of more generally diffused disease, the typhoid poison and the typhoid state may take place in all seasons but more frequently in the autumn. There is no doubt, but that it is sometimes associated with every other form of malignant fever, from the influence of marsh miasmata. There is some probability of a peculiar degree of some predisposition of mind and the constitutional disposition, together with the increasing activity of which in other respects, is sufficient to the appearance of a malignant, or rather malignant form of disease called typhoid. I think it more probable that typhoid is the result of miasmatic impregnation than contagion, than that it is produced by a simple cause, being dependent upon the constitution of the patient. The question however is to be decided, as we must be guided, that is, practitioners must be guided from either experience, and not little susceptible of proof.

If the long continuance of the effects of miasmatic causes, have a tendency, sometimes, the tendency to a peculiar effect on the constitution.

- Typhus Fever -

True Typhus or nervous fever occurs generally in the winter, the typhoid fevers and the typhus state may take place in all seasons, but more frequently in the autumn - There is no doubt, but that it arises in common with every other form of idiopathic fever, from the influence of marsh miasma. This in consequence, of a peculiar degree of impression, of modifications in the constitutional susceptibility, together with the succeeding action of cold or other agents, is suspended till the approach of winter, and modified into that form of disease called typhus - I think it more probable that typhus is the result of miasmatic impression thus suspended, than that it is produced by a similar cause, acting shortly before the developement of the disease - This question however it is vain to argue, since it must be evident, that no practical inference can be drawn from either supposition, nor is either susceptible of proof -

Of the long suspension of the effects of morbific causes, we have a very striking example in the tendency to a recurrence of fever in the intermittent

form, in the summer or autumn, succeeding an attack of fever of any kind, suffered in the preceeding year, without a renewal of the original cause. In this and other cases of a similar kind, the cause of the remote affection, must have remained constantly in the system,- but by laws of the animal economy, of which I am otherwise ignorant, its effects are suspended to a distant period.-

The occurrence of typhus is favored by every cause producing debility of the body, or depression of the mind.- It rarely occurs in infancy, but is apt to run through families in which it may arise.- This circumstance is easily accounted for, by the common subjection of all the members of the family, to the operation of the same remote cause, without resorting to the now exploded doctrine of contagion.- To say, that typhus is a disease "contagious in foul air" appears to me to be nothing more than asserting, that the same air capable of producing it in one person may also produce

it in another. In fact it is either a self evident truism, or involves a gross violation of philosophical reasoning.-

That stage of typhus which is called the forming stage, or the stage of oppression, is of various duration, but generally it occupies from three to four days- The simultaneous prevalence of the disease affords, affords perhaps the only tolerably certain criterion, by which the symptoms of its approach, can be distinguished from those undefined complaints which either precede the attack of other diseases, or which frequently pass away without the occurrence of any serious indisposition-

Those symptoms so far as they have fallen under my observation are nearly the following;- languor, and lassitude, sensations of weariness or aching in the limbs, occasional pains of the head and back, costiveness, dry, hot, and constricted skin, weak and frequent pulse, loss of appetite, furred tongue, frequent sensations of chilliness, and generally from the first a disturbance of the sensorial and nervous functions evinced by a slight

degree of subsultus and by depression of spirits—
No one of these symptoms alone is diagnostic of the disease, but, if the tongue be considerable furred, and there exist at the same time several of the other complaints mentioned above, and if the situation or season be such as would lead to a suspicion of the approach of typhus, we may conclude with tolerable certainty that its attack is at hand—
The disease at length is commonly developed by an increase of the chilliness, succeeded by greater excitement, increased heat of the skin, augmented disturbence of the gastric functions, aggravation of the pain in the head, back and limbs, and increased disturbance in the functions of the brain and nervous system— This state which is known as the stage of excitement, generally continues from one to two weeks, within which period the patient sinks into the third stage, which has been called the stage of collapse— There is no distinguishing line between these two stages, but the transition from the one to the other, is for the most part entirely gradual, corresponding with the gradual

approach of that debility and exhaustion of the vital powers, to which there is, from the earliest period a decided and marked tendency—

The pains, whatever parts they may have occupied become diminished and are less attended to by the patient, the pulse becomes more frequent and feeble, but generally less quick, the tongue first becomes dry, and then gradually changes its colour to various shades of brown, terminating in black, or in a smooth shining red, with cracks or fissures; the skin generally continues dry hot and constricted; the subsultus tendinum increases, delirium sometimes ensues and the patient almost uniformily sinks into a state of constant stupor, from which he may be easily aroused, but immediately relapses—

Diarrhœa in some cases occur, but it appears to be accidental and required to be controlled by astringents;— it is a troublesome symptom, always seeming to increase the danger—

In this hasty ~~hasty~~ and imperfect sketch of the symptoms of typhus, I have purposely refrained from consulting any book, save the surgical and

medical memoirs of Prof. Smith, the father of the present worthy Professor of Surgery in this school; but have rested in a measure upon my own recollection of cases which have fallen under my observation –

The above symptoms however are liable to considerable variation, a property which is indeed common to all other diseases. The conditions of the skin and pulse are particularly liable to considerable variation, the former being sometimes morbidly relaxed, and below the natural temperature, while the latter is occasionally subject to intermission or other irregularities –

It must be observed, that, subsultus tendinum which when supervening upon other diseases, is always an alarming symptom, being almost inseparable from the existence of this, and being frequently one of its earliest symptoms, can afford no ground for prognosis. Its remarkable increase however in the latter stage, may become a just cause of alarm –

The third stage of typhus is like those which precede it, of uncertain duration, occupying from one to

three weeks, or even a longer period - It is common for a crisis to occur and for convalescence to begin, some time in the third week, from the formation of the stage of excitement -

I must confess that the above description is only applicable to a certain form of typhoid disease, but it is that form to which the name of typhus or nervous fever has been given by nosological writers before the present age - "Fevers of a typhoid type and nervous character, assume very various appearances, and constitute an extensive class of febrile diseases - The synochus or typhoid grade differs from the disease I am describing in several important particulars - In the latter the forming stage is more commonly marked by premonitory symptoms of several days duration; - in the former the attack is frequently ushered in at once by a distinct chill or by chilly sensations immediately succeeded by increased heat, pain of the head, back and limbs and nausea - "The duration of the former, is both shorter and less determinate. If proper measures be pursued, convalescence will

very commonly commence in the first week and will seldom be delayed beyond the second - If these typhoid and synochus fevers be correctly treated in the begining, they will I believe very rarely assume the symptoms of extreme prostration, which are generally characteristic of the form of fever just described - Black or smooth red tongue, great debility and stupor are symptoms which generally arise in typhus, when it is not cut short in the first stage, - whereas in the ordinary fevers of winter they are of rare occurence -

It must be evident that the question, whether those fevers be really typhus, resolves itself into the inquiry whether they shall be called by that name? The theory of contagion alone has tended to confound the minds of physicians in regard to the identity of the ordinary winter fevers with typhus - Admitting this theory, - the inquiry would be, whether they are produced by the same contagion, - but rejecting it, the discussion terminates in a vain and futile dispute about the meaning of words - For my own part, except in marked cases of intermit=

-tent, remittent or typhus as above described. I am averse to specific distinctions, and prefer always to adopt the simple term fever, designating its varieties by circumlocutory explanations. This mode of speaking and writing on the subject, is, I think, far more philosophical and less illusory, than an attempt to distinguish by specific names all the forms of fever, which are almost as various as individual cases.

It is very common for local inflammation to supervene upon typhus and more particularly during the stage of excitement. In many cases this inflammation is confined to the lungs and their membranes. It is sometimes attended with the spitting of blood, whether any permanent disease follows from this pulmonary affection, I am not prepared to say, but certain it is I have never witnessed such a consequence. It generally passes away with the disease of which it was a symptom. Sometimes though rarely the inflammation occupies the brain or its appendages, and this seems to constitute one of its most

intractable of its complications - It appears to be aggravated by the stimulants, often necessary, than any of the other forms of local inflammation - Enteritis also occasionally occurs, and is perhaps the most fatal of all the local affections liable to be complicated with typhus; - fortunately, it is not frequent.

- Treatment -

I now proceed to the treatment of Typhus fever, and on this part of my subject shall pretend to offer nothing new -

- Blood letting -

The most important question at the outset arises concerning the propriety of venesection - In typhus fever I think that bleeding can rarely if ever be admissible - If there be any cases in which this evacuation is advisable, they must be those only in which it is complicated with local inflammation of some of the vital organs - If an urgent affection of this kind especially of the brain or intestines, should occur in the earliest stage of typhus, it may be advisable for the sake of temporary relief to risk the increase of the succeeding debility and to bleed when we would not otherwise have judged that measure proper; -

but no circumstances whatever can justify the production of extreme prostration – By such hazardous proceeding the local disease would not be relieved, while those powers of the system, which would have sustained the patient in the struggle might be irretrievably exhausted. When the disease proceeds to a fatal issue, the ravages of local disease must of course continue uncontrolled by the powers of nature; but it by no means follows that those ravages would have been arrested by venesection –

The relative importance of the temporary relief to be obtained by venesection, and of preserving the vital powers, for the long and arduous struggle to which they must be afterwards subjected, should be most cautiously estimated; and such cases are among those emergencies, which demand the most refined discrimination, and afford the highest exercise for professional sagacity –

Where the propriety of general venesection is questionable, local blood letting with such other parts of the antiphlogistic as may be appropriate will be the best means for combatting local in=

-flammations occurring in typhus - When debility has proceeded to a certain extent it becomes necessary to treat the case as if not complicated with local disease, there being no means of counteracting the latter, except blistering, which in such conditions is a remedy of great efficiency -

I shall now close this branch by a few remarks of general application. I presume, that by a due estimation of the age and constitution of the patient, and by a proper consideration of the tendency of the diseases, simultaneously prevailing we will be enabled to form a sufficient accurate judgement of the propriety of venesection, from the symptoms of each individual case. The tendency of the prevailing diseases is a most important subject of consideration, and should determine our course in every case of doubt - It is also proper in cases of doubt, to premise other evacuations and to wait and observe their effects - It may also be adopted as a general axiom, that in all cases of typhoid tendency in which the symptoms present render us doubtful as to the propriety of bleeding, it is safer to omit or at least to postpone it. In such cases it will be safer

to err by using too little, than too much evacuation and especially by the lancet. Other modes of depletion assisted by other remedies, will commonly afford the relief, which we ought be disposed to seek from blood-letting - It is impossible here to discuss at greater length the general symptoms by which we are to determine the propriety and extent of venesection - This is a subject whose importance pervades the treatment of all diseases more or less -

- Purgatives -

This class of remedies is of primary importance in every form of fever, and under certain modifications and restrictions they became necessary in all its grades -

Whatever purgative may be selected at the outset, calomel should always be one of its ingredients - Besides its important effect in dislodging the contents of the alimentary canal, and producing consistent discharges, it is universally admitted, to exert a powerful and beneficial agency, in restoring the healthy functions of the liver, and skin -

In cases where the system may have been agitated

by the previous use of emetics or other remedies and in certain cases of considerable pain or spasmodic action, it will frequently be found useful, to add to the calomel a large dose of opium, and suspend for a few hours its cathartic effect. The agitation or spasm is thus allayed, and time is afforded for the mercurial medicine to produce its peculiar effects on the liver and skin. At the end of eight or ten hours a dose of some common cathartic may be given, and repeated in smaller quantities every two or three hours, till the intestines be fully evacuated. Castor oil, Infus. Sen. with Sulph Magnes. or Calcined magnesia diffused in a solution of the Sulphate, are perhaps at this period, as good forms of medicine as can be adopted.

The degree of catharsis to be adopted in typhus, like the extent of depletion in all cases, and the precise direction of all medicinal agents, must ever be defined by the judgement of the practitioner, and can be but imperfectly ascertained by general rules. It may be laid down as a general rule, that while the symptoms of fever run high especially if there be any local

affection, active purgatives may be repeated at short intervals, while the strength of the patient seems sufficient to support their operation. These intervals may vary from one to two days, according to the urgency of the symptoms we may seek to control. In affections of the brain appearing in the early stage of typhus or typhoid diseases, they may perhaps be used with greater freedom, and are more indispensably necessary than in any other form of local inflammation occurring in such cases. Where nausea yellowness of the skin, or an uncommonly morbid condition of the previous discharge, may indicate that the contents of the intestines, still retain in a high degree their morbid character a longer continuance of active purging may be required. It must always be remembered however that there are limits prescribed by constitutional debility, which should never be transgressed; When he has arrived at those limits, is sometimes one of the most difficult subjects on which the practitioner is called to exercise that discrimination, which is the most important faculty in the exercise of his high and responsible profession.

When the judgement of the practitioner shall determine that active purging is no longer necessary or admissible, the regular action of the intestines should be secured by the periodical use of some efficient laxative. The form of medicine commonly used for this purpose, is a combination of calomel and rhubarb, in the proportion of from two to five grs. of the former to fifteen or twenty of the latter. The precise dose of these articles may be regulated by reference to the extent of evacuation desired, and this must be determined by an estimate of the constitutional debility and the morbid nature of the matters it may be designed to remove –

It is a subject of universal observation, that even in health, when the contents of the intestinal canal, are retained beyond the accustomed period of discharge, they uniformly become a source of irritation and disorder. That constipation existing in the irritable state of fever would become the cause of still greater irritation, and of much more important functional disorder, would be expected a priori on grounds of reason, and universal experience has established the fact.

– Diaphoretics and Refrigerants –

These remedies enter into the cure of typhus, only according to the indications which regulate their use in all other diseases. Calomel and Opium, Dovers powder, camphor, spt. nitri dulcis and serpentaria combined and varied according to the stage of the disease and the condition of the patient are perhaps the best diaphoretics. When the typhoid appearances have commenced antimonials should be used with caution —

— Blisters and external irritation generally —

That, when the general excitement is reduced to a certain point, these remedies perhaps possess the best febrifuge power — With this general view, when such a condition exists, they are used in every form of fever, even though no local affection exist. They tend to translate morbid excitement and irritation from the interior to the surface. In every stage of typhus and all typhoid diseases, blistering is by far the most important means of counteracting local inflammation. The effect of this remedy in inflammation occurring in the typhoid state, is as striking as that of venesection in those of the sthenic diathesis — Though worthy of the highest confidence, they are not however to exclude the use of other remedies —

As a means of exciting the system from the torpor which prevails in the advanced stages of typhus, and of sustaining its languid energies, blistering stands high in the estimation of medical men –

The legs, wrist, neck and sometimes the head are selected as the parts to which their application is most beneficial. It is needless to say that when designed to remove local disease they should be applied over the part affected. For general purposes they should be applied in succession so as to keep up a constant irritation throughout the stage of collapse –

— Stimulants and Tonics —

The choice of stimulants, and the mode of their application cannot fail to be subjects of perplexity to the inexperienced practitioner, and indeed the selection has not been determined with sufficient precision by the experienced members of the profession. If it be said that our choice is to be governed by circumstances, still the question recurs, what are the circumstances which shall determine the selection?

Of the stimulants used in typhus it is unnecessary

to enlarge. Ammonia. Camphor, Serpentaria, with wine or brandy, and variously combined and alternated constitute the routine usually employed. Ammonia is said to be admissible earlier than any other diffusible stimulant, on account of its tendency to act upon the skin. Whether camphor be a stimulant is a contested point. It is however generally given with stimulants, and I am disposed to regard it as such though its powers may be exerted chiefly on the stomach and nervous system, without directly augmenting the force of the circulation—

As soon as convalescence occurs, the most decisive indication of which will be afforded by the tongue becoming clean and moist, the stimulants should be gradually withdrawn, and the quantity of nutriment diminished. Whatever may have been the diet before, it should now be made light, and mild tonics such as bitters and elixir of vitriol should be substituted for the stimulants before used. Particular attention should at the same time be paid to the state of the bowels, their action being only gradually restored, and a tendency to constipation in general existing, throughout

convalescence.

Wherever the disease has originated, in intermittent or remittent fevers or in seasons when such forms of fevers are prevalent, bark or sulphate of quinine, should always be a principle ingredient in the tonic course, pursued during convalescence, and indeed should be used at intervals of a few days, until health be restablished, though tonics might not otherwise have been thought necessary. If this were neglected and intermittent paroxysms might occur, which under such circumstances, would be a dangerous event, - such an occurrence is not surprising when we remember that in seasons where the various forms are prevalent, intermittents and remittents are liable to alternate in various ways with continued fevers, whether inflammatory or typhoid —

W. T. R.

An Inaugural Dissertation

On

Pastritis Acute and Chronic

Submitted to the Examination
of the
Provost, Regents and Faculty
of Physic
of the
Maryland University
For the degree of
Doctor of Medicine

By
Wm. T. Mitchell
Maryland

February 9th 1847.

The subject which I have selected is one of the diseases of the Alimentary canal and pertains especially to a mucus membrane, which when attacked with Inflamation is not so rapid in its spreading around to its subjacent tissues as the membranes of a serous type which generally spreads very rapidly after the Inflamation becomes Evident in one portion of its Envelopement. The former does not require so active Treatment while the latter must be promptly and efficiently treated or death soon winds up the scene.
The Stomach is an organ which is the expansion of the Alimentary canal situated in the Epigastric region and extending into the left Hypochondriac Its direction is oblique from above downards and backwards from before It has two orifices the Pyloric and Cardiac and two curvatures lesser

and greater, which curvatures give attachment to the Peritoneum termed the lesser and greater omentum. Its internal surface is lined with a Mucous Membrane, which is the seat of the disease upon which I have chosen my theme. As it is so considered By Professor Power.

Acute And Chronic Gastritis or Inflamation of the Mucous Membrane of the Stomach. This organ being one of the great sources by which digestion is carried on, would naturally lead an unsuspecting Mind to suppose it to be the seat of disease than it is in reality But as I have already hinted it is seldom the seat of acute Inflamation unless when it has fallen into hands of some Malicious and ill disposed person who wishes to destroy his Existance by taking some poisonous

draught as Opium, Arsenic and corrosive Sublimat or when he has been crowed full of some notorious and infamous Quack Medicine, warranted to cure all digestive dis-orders, at the same time laying a foundation for this severe and un-manageable disease (If I may so use the expression) by their offending and hurtful Medicines, But I must say to a man of any sense or Intellect who will be dosed by these Medicines an attack of acute Gastritis will be far too preferable for his stomach to make the theme of its basis.
Again when a person has been over come with exhaustion and heat and has imprudently drank of cold water to excess it has often proved to him his imprudence and want of proper judgement by an attack of Acute Inflamation. It may also come on

sometimes, having no known source of its cause, But Watson says he has never seen a case of Idiopathic Gastritis". (And Louis states that during six years experience at La Charite in which period he noted details of 6,000 cases of disease and of 800 dissections, he did not meet with a single instance of fatal Idiopathic Gastritis) Whereas Acute Gastritis from acrid or corrosive poisons he has frequently met with, and then remarks on highly interesting subject it then becomes. When any acrid or corrosive poison has been taken into the stomach, then arise the symptoms and phenomena by which we are able to make our diagnostic with correctness and precision. In the first place Inflamation is excited as their is something now acting upon it as

a violent irritant, then we find the unhappy individual with the usual signs of Inflamation, pain usually characterised by a burning character in the Epigastric Region. with vomiting especially when anything is taken into the stomach, this is one of the best diagnostic symptoms and often accompaning this we have hiccup and tension of the upper part of the abdomen, But most generally this comes on in the latter stage of the disease when the patient is much emaciated, debilitated and sunken. These are some of the Internal symptoms and now the local symptoms are a fever of a thyphoid type, and a small and weak pulse, although the pulse is generally small it is sharp and hard and soon becomes (as the Inflamation advances) thready and feeble. The

Muscular System also undergoes great depression and the patient now looks pale and faint, with cold Extremeties, collapsed features, and a damp skin. Death is threatened by Asthenia. Now this subdued state of the circulation is dependent upon the existing Inflamation for the pulse expands and becomes more distinct and full under the ordinary means resorted to for the Treatment of Inflamation when it is early performed. And upon this remarkable influence of the lancet there must exist an evident Sympathy between the Heart and Stomach. For instance if a person in Extreme Exhaustion and fatigue take into the Stomach a little Brandy and water, he will almost instantly recover his pulse and colour too soon to allow of our attributing this

speedy recovery to the absorption of the Brandy into the Blood. And also to illustrate this more fully suppose a person fall from a considerable height and encounter the ground with his stomach upon a stone or post, what will be the result, why death by sympathy from the stomach to the vital organ, which is no doubt conveyed by the great Solar Plexus of the Ganglionic system which lies immediately behind the stomach and situated by the side of the Coeliac axis and appears like an aggregation of a number of smaller ganglia having spaces between them, from which ganglia the Heart is largely supplied with nervous filaments. Hence we might be certain of sudden death when so important a plexus as this would receive the blow by

the depressing influence Exerted on the natural action of the Heart. The conclusion then to be derived at, is that death in these cases begins at the Heart, as Bichat describes it to be. But to return again more directly to the Symptoms the pain that accompanies Gastritis is greatly augmented by pressure being made over the Epigastrium. and also by the sudden descent of the diaphraghm in Inspiration and Respiration, which consequently renders the breathing short and Constrained. If the Inflamation should be very violent, we may probaly have a serous membrane complicated (Peritoneum) which will be made plain by the difference of the pain, for now the patient will say his pain is pricking and sharp with a burning sensation and he

Expresses great anxiety and restlessness He is troubled with great thirst whilst all drinks are instantly rejected when taken into the stomach The Bowels are generally bound But if Corrosive Poisons are its cause they are Irritated and Dysenteric Diarrhoea ensues with much tenesmus and griping. So much than for the Symptoms of this disease occurring with great severity or with Mitigation.

Prognosis is generally unfavorable If death takes place it is in a few days after the Inflamation has commenced, and fainting with a Remission of pain sometimes very sudden winds up the scene of this short But yet sweet life.

The Pathological changes to be seen after death are Redness, softening, sloughing, and even

perforation of all its coats, if very severe and violent acrids or caustics have been its sole cause. The redness and Inflamation Says Watson are used to often as convertible terms, Cullen, Morgagni, Haller of former years and Broussais and his disciples of more ancient date have strenously inculcated the opinion that in all Fevers their is Inflamation of the stomach and Intestines. finding the lining membrane red and vascular in the most of their Post Mortems. But Dr Yelloly Says that this vascular fullness in the villous coat of the stomach, whether florid or dark coloured and in distinct vessels are not to be considered unequivocal marks of Inflamation inasmuch as they occur in every

variety of degree and character and in situations where the most healthy aspect of organs may be expected. This vascularity by Dr Yelloly is entirely venous and depends on a power capable of being exercised on the artery at the close of life, which carries on the blood to the veins after the fresh supply of blood is stopped from the Heart and then this poor becomes transuded through the coats of its vessels and spreads over the surface whereas the redness of Inflamation is circumscribed and of a limited extent and its general location is upon the upper and lower side of the tube, when softening is present we have a much more marked sign of Inflamation which is produced by decomposition, chemical

or mechanical as it is well known this organ is slow in passing into a state of putrifaction after death.

Now having given the causes, Symptoms, Prognosis, and Pathological changes of acute Gastritis, the next in order is how to treat this interesting disease. The great secret lies in Venesection, this must be performed early in the disease if the pain be severe, notwithstanding the smallness and feebleness of the pulse. for by the use of the Lancet it often gains, and acquires strength and fullness, As to the quantity of blood to be abstracted must be left to the judgement and skill of the Practioner which he will be guided by keeping his hand upon the pulse, take a small teacupful and if the Artery becomes fuller and stronger go on and take as much more, and so

proceed according to the circumstances and the effects produced. Local Bleeding may be used by applying leeches over the Epigastric region and covering their bites with a soft and light poultice. The horizontal posture must be strictly maintained so as to keep the influence of the dis-eased action from augmenting the Hearts action by the position of the body. Internally we may administer small lumps of Ice and Ice water if it can be retained; Purgatives should not be given by the Mouth for they will always be thrown up and so increase the Irritation. So if the Bowels are not much constipated open them with Enemata of warm water But if they are Purgative Enemata must be used, If on the contrary they are loose and Irritable, Opiate Injections do good as. 30 or 40

Gtts of Laudanum with 3 or 4 ℥ of Gruel or starch, And this often by sympathy produces a very tanquilizing Effect upon the stomach and checks the vomiting. These are the Inflamatorial Remedies, If corrosive poisons have been swallowed the stomach pump must be promptly used, and if this is not convenient give such agents as we know have the power to neutrilize the effects of the poison taken. Or in other words are its Antidote.

Chronic Inflamation no doubt often exists But its symptoms are so mild and simple that it is hardily perceptible to its bearer. But still it deranges and takes away the proper tone and strength of the functions of the stomach, which requires as much attention from the Practioner as the acute. From its various and Multi

form symptoms, it is quite difficult of diagnosis between it and that so common disease called Dyspepsia In this latter disease however the symptoms may be various and multiform, but at the same time no degree of Inflamation exists. Whereas in Chronic Gastritis we have evidence of Inflamation by the morbid appearences after death. Indicated by the thickening of its coats or when some portion has been removed by ulceration If the Inflamation has been present for sometime, we not uncommonly find the mucous membrane over a larger or smaller space thick, granular uneven and of an unnatural colour often Gray or slate coloured, this gray colour of the coats are much dwelt upon by French Pathologists as an unequivocal mark of chronic Inflamation, But Watson believes it

to proceed from the action of the gastric acids upon the blood which under this slow process of Inflamation is detained in the vessels of the affected part. Ulcers are sometimes the consequence of this chronic state of the stomach. These ulcers upon this membrane may prove fatal by eating their way through the coats and allowing the food taken to pass into the Peritoneal cavity and causing severe Peritonitis, or they may lay over some important Blood vessel, and by going through its regular process, cause death by fatal Hemmaraghe, and finally these ulcers may heal, as has been proven by finding cicatrices in the stomach in post mortems. The symptoms are pain and tenderness on pressure by the hand or food taken into it, and only felt perhaps

Whilst digestion is progressing. we also have flatulence and eructation langour and debility. It is often the case that these symptoms are not lasting or constant. for sometimes their is no pain, But a sense of heat and acidity, the vomiting is constant only at the beginning for if it was the patient would soon die from Emaciation. The local symptoms are some quickness and sharpness of the pulse more or less thirst, dry skin, scanty and deep coloured urine, and the tongue is red especially at its tip and edges, it may be patchy and fissured or smooth and glossy.

As for the treatment of this affection we must pay particular attention in administering any agent which will add to the existing mischief The ordinary remedies for chronic

Inflamation, Leeches over the Epigastrium, as long as their is much tenderness on pressure, when the tenderness is less use counter Irritants, Reapeated Blisters or friction with Tart Emetic Unguentum.
Proper regard must be paid to due Regulation of food which must be mild and unstimulating in its character as Arrow Root, Tapioca Sago, Milk and Jellies, And even these must be taken in moderate quantity so as not to distend the Stomch too Much. As for Internal Remedies, Mild Cayatives by the Mouth and purgative Enemata by the Rectum.
Watson relates a case in which he succeeded, By stripping his patient every Morning and Evening before a fire, and using friction with warm Oil and a warm hand-

over the Epigastrium. Internally gave a tablespoonful of milk, and if he retained this went on increasing the quantity, for the mere sake of sustenance. This plan of treatment was attended with perfect success.

An
Inaugural dissertation
on
Habit of Constipation,
submitted to the examination of
Provost, Regents, & Faculty
of the
University of Maryland,
for the
Degree of Doctor of Medicine,
by
J. C. Kinkle.

1847.

To

Joseph Robys M. D. Prof.

Dear Sir;

In accordance with the rules of the University, I have instituted an inquiry into the subject of 'Habit of Constipation', which has appeared most appropriate to be adopted as the theme of my inaugural thesis.

I take the liberty of inscribing these pages to you, for the twofold purpose of acknowledging the pleasure and instruction which I have derived from your lectures, and as a testimony of the deepest confidence, which your zealous and unwearied labours, your impartiality and distinguished attainments, have inspired.

We have attempted a consideration of the reciprocal influence of the mind and body, and the efficiency, and peculiar adaptation

of this influence to our subject. The controlling power and conservative agency of the mind over the diseases and frailties of the mortal part of us.

And, as this department of the medical science has received your particular attention, I venture to anticipate, that my remarks thereupon, will not be uncongenial, nor incur the fault of a tedious perusal.

Moreover, I hope, that if I have, in any degree indulged in hypothesis, or unqualified speculation, that you would rather ascribe it to my inexperience and untrained Judgement, than to a voluntary, and tasteful predilection. The subject is indeed one of vast importance, and of singular interest, as it involves the health and comfort of every individual.

Viewed as a disease, (a term to which it is justly entitled), I confidently believe no other has a more extended influence, a more

widely diffused agency in disturbing the harmony of the vital forces. Painful experience fixed my attention to it, and gave me the first impulse, to the investigation and generalizing of its facts; and careful observation of others, hath fully corroborated the conclusions which have been deduced. The inquiry then, is especially directed to that morbid condition of the lower bowels, depending on habit, and consisting in torpor and profound sluggishness of their excreting faculty; and also, to that corrective agency, or astonishing voluntary influence, which the mind may exert over the bowels, for the counteraction and distruction of this habit.

The remarks, for the sake of distinction and perspicuity, will be arranged under three divisions. First,— the injurious influences, which a laden and constipated state of the bowels, has, either mechanically or through sym-

pathy, upon the various functions, and upon the mind. Second, — the pathological conditions of the bowels, during their habitual torpitude and inaction. Third, — the manner by which the counteracting influence of the mind may be brought to bear upon the habit, with a view to its removal.

I assure you, that it is with most forbearing diffidence that I submit this humble effort to inspection of aged and experienced Judges; but I am consoled with the hope of drawing largely upon the liberality and charitable feeling, so characteristick of the Faculty.

I remain your obediant pupil.

J. C. Rinkle.

Habits of Constipation.

There is no disease in the whole catalogue of maladies, having such extensive prevalence, and to which the human family is so remarkably obnoxious, as to the disagreeable ennui and inconveniences of a habit of constipation

No class of persons seem to be exempt from it; almost all the avocations which engage the attention of men, tend materially to favour it; but more particularly however, is it observed in that portion of society, where indolence and luxury are the predominating characteristicks.

Civilization appears to be attended, in its progress, with an increase in the liability to irregular habits;- inasmuch, as it has a manifest tendency to engender in us modes of living, utterly incompatible with a healthy condition of the system, and the regular performance of its functions.

In truth, the present age bears a generation

which boasts of exalted intellect, refined taste, &c. and the 19th Cen. styles itself unexampled in moral and political excellence; yet physically, has undergone a lamentable degeneration, and is gerious ly bad-off in hope. Men's genius now, worketh formidably, in evil customs, and in the creation of base, distinctive habits. We are, consequently, exposed to the baneful influence of distressing, as well as loathsome maladies, from all of which, the natural simplicity, and unperverted manners of our progenitors, afforded a happy exemption.

It is scarcely to be expected therefore, that a generation so generally reckless of its pristine vigour, so careless, so utterly indifferent to the perpetuation of its original stamina, should implicitly obey, or even recognize the necessity of apparently so "insignificant a thing", as a daily evacuation from the bowels.

Physiological researches have incontestably established

the following as an eternal law of our organization, the ἄτροφος of human health: — to maintain the natural vigour of the various organs; to sustain an energetic and enlivening distribution of the vital spirits; in short, for the preservation of of health and comfort, requires the daily evacuation of the bowels.

There are doubtless periodical passages having intervals of from one to fourteen days, and even a month, without any palpable manifestations of disordered action, or impairments in the system: yet these few instances are mere exceptions, and do not, in the least, invalidate the verity of the above therapeutical axiom.

A few remarks now confirmatory of the preceding will not be amiss, and wherewith we shall enter the first division of the subject.

It is well known, and attested in the in the experience of almost every individual, that to

obtain in twenty four hours, one or two stools, has the effect of not only removing those disagreeable feelings of weight and distention; but of disburdening the mind, as it were, of a state of gloom and sullenness, and arousing it to a pitch of agreeable excitement and pleasant activity.

I have been frequently informed by persons habitually costive, and have had ample demonstrations in my own experience, of the rapidity with which those uneasy sensations have disappeared, so soon as the rectum and flexure were relieved of their accumulated contents.

The anatomy and physiology of the rectum and sigmoid flexure, are alone sufficiently explanatory of the influences which constipation exerts upon the functions of the brain.

Their nerves, unlike any other portions of the alimentary tract, both motific and sensific, come

directly from the medulla spinalis.

They are therefore, possessed of high degrees of sensibility and irritability; and are consequently influenced, not only by impressions locally created, but by the operation of distant sympathies, and especially by the great function of nutrition

These facts will be more elaborately considered hereafter, as they involve the principles of the peculiar treatment, we have to propose.

It follows then, that constipation has a very marked effect upon our moral nature.* In observing the manners of those who are thus afflicted, we at once, detect the traits of irascibility, and the evidences of a selfish and lounging disposition.

Those men, who are of a mild and tractable nature, occasionally become void of all regard for others, indifferent to the cheering and comforting influence of social intercourse, and strangely partial to the dull and monotonous shades of seclusion.

* "We know not, says Mr Alexander, the marked effect that the accumulation of the fecal matter has upon the moral disposition."

And unfrequently, whilst the mental powers are thus disturbed, and by the operation of a contiguous sympathy, the will irresistibly yields to voluptuous excitation, followed by the commission of secret sin, at once shamefully degrading, and criminal to nature. This sympathy, which is excited by the peculiar irritation of the fæces, is reflected upon the genitals, through the excito-motary function, and from thence to the brain, creating strong erotic desires.

A laden state of the bowels repeatedly sustained, and of long continuance, exerts mechanically no inconsiderable effect upon the neighbouring viscera. The bladder from its proximity to the rectum, is particularly liable to suffer from the pressure thereof. Hence we observe, that in robust and vigorous habits, it generally produces a partial retention of the urine, from its being a mere physical impediment to the free action of the de-

trusor muscle. In those individuals who have weak and delicate constitutions, it mostly causes a slight incontinence, or, from the irritability of their nerves, even a painful and distressing micturition. I am thouroughly convinced of these facts, from numerous and satisfactory demonstrations.

It has frequently been my curiosity to observe, when the bowels were heavily ladened, that during the day there were frequent, and copious discharges of pale limpid urine; and if immediately after one of these discharges the individual could procure the evacuation of his bowels; that the urine he then had occasion to void, was high coulered, burning, and presenting considerable viscosity.

In such instances it appears, that there must be a certain quantity of urine remaining in the bladder, notwithstanding the previous discharges. This residual portion, by the evaporation of its aqueous constituents, becomes thick and tenacious

and, as long as it is supported in the vesical fundus by the bulky rectum, so long is it effectually enabled to resist the contractile movements of the viscera.

Inflamation is sometimes excited in the rectum itself, from the distention and continued irritation of its sensitive structures, — attended by the most painful involuntary contractions that can be possibly endured: or these spasmodic contractions of the muscles of the perineum and the anus, may be induced by the extension or reflection of mere irritation.

It may be proper to state, that the elaborate experiments of Dr Bierne, Copland, and others, of more recent origin, have proven conclusively, and directly contrary to previously conceived notions, that the rectum, in its healthy condition, always remains closed, and its parietes in contact, and without any free communication with the colon through the flexure, until but a few moments antecedent to an evacuation. Now although this is true as reg-

,ards the natural process of defecation, and even of some causes of constipation, yet it bears not upon our subject, nor contravenes, in any degree, its principles.

Habit of Constipation implies the gradual impairment of irritability in the inferior portions of the alimentary canal, and a corresponding diminution in the force of peristaltic action

It is essentially connected with the lower bowels, and depends, immediately, in addition to the above, upon the loss of sensibility, a dry or sub inflamitory condition of the mucous membrane, and torpor of the follicles of the liquor intericus.

The natural barrier which has been designed in the sigmoid flexure, becomes inadequate for obviating the continual descents and accumulation of the egesta in the rectal pouch. The rectum thus blocked up by the impacted feces, cannot permit the escape of the liquid and gaseous matters. The consequence is that they are forced back, and accumulating, they dis-

tend the cells of the colon, and thus not only hinder the propulsion of the more solid portions from the cæcum, but constitute, as we shall see, a serious impediment to the abdominal functions.

I regret the necessity of this digression, yet the nature of the premises has seemed to demand it, ere the preceding, and particularly the following remarks can be assumed as tenable.

The kidneys are occasionally subjected to considerable presure, and a tendency to ischuria, or a transitory interuption of their function may supervene, in consequence of the infarcted feces distending the cells of the colon, in the region of these organs.

Respiration likewise, is certainly liable to be interupted by the great intestine acting on the diaphragm through the intervention of the liver, and thus thwarting the full and regular respiratory movements of this muscle. This hindrance to the free play of the respiratory apparatus is essentially concer-

ned in the production of feelings of distress; of oppressive weight in the epigastric and præcodial regions; of anxiety and mental disquietude; and is, at times, causative of that horrible and even perilous fit incubus. These distressing accompaniments of a costive habit of body, recur more particularly when the individual is in a recumbent position, and occluded from the counteracting impressions of external stimuli.

The necessary continuity of the excreting vessels of the liver, is often distroyed, and the bile within them retrograded by the alternating pressure of the distended arch of the colon. The ductus biliarii and the larger ducts, are thus blocked up and the consequences are, the speedy superventiion of Jaundice, and the evils of an imperfect and incomplete digestion.

These effects are mostly of short duration, but are exceeding common occurance, and alm-

ch as often mistaken for more serious perversions of function. A recourse to the Jurantia however, soon detects what had not been previously anticipated.

The dejection of prodigious volumes of flatus, and indurated excrement, is followed by a deluge of bile, the stagnant accumulations of the gall bladder, and hepatic ducts.

The stomach, probably, may be greatly interrupted in the digestive operations, in consequence of the heavy colon falling to the umbilicus, and even to the illiac fossae. This is confessedly, as yet, no more than a pathological assumption, and which we have no pretention to support, upon grounds of experiment, or even upon authority; but its consistency is merely suggested, in view of the anatomical relations of these viscera. It is demonstrated, that the stomach mantains very important peritoneal connexions with the arch of the colon, through the medium of dense areolar tissue, and particularly

the omentum magus. Therefore, when this transverse portion of the great intestines, is so heavily ladened with its accumulated contents, as to change its usual position and relations, - it is not unreasonable I presume, to suppose, that the stomach likewise suffers a relative change, probably from a transverse to a depressed and somewhat perpendicular position. If we recollect the capacity of the colon, in retaining within its cells vast quantities of colleric matter, and, at the same time, the extreme mobility of position as regards the stomach, - the possibility of its being disturbed thus, by a mechanical drag is readily conceived.

Admitting the plausibility of the assumption, it furnishes rational explanations of the diversified morbid phenomena, that are continually manifested in such cases. The feculent odour of the breath evidently could not exist, if the pyloric valve were acting properly, and with

freedom, or the normal curvatures of the stomach preserved. The regurgitation of billious fluids from the duodenum into the stomach, followed by acute indigestion, sickness, vomiting, &c. most frequently acknowledge the same cause.

The transverse portion of the duodenum, with the unresisting vertebræ behind, must sustain the superincumbent weight of the colon. This, together with the collections of vitiated mucus, and other stagnant secretions, have the effect of entirely occluding, for a time, the calibre of the intestine;- forcing the bile back upon the already deranged powers of the valve, which then offers but a feeble barrier to its entrance.

Again, the food, in its crude state, gravitating upon the valve, when it ought to be in the fundus of the organ, renders perfectly intelligible the causes of the depraved appetite, the impaired digestion, and a host of secondary evils.

In view of these considerations, we are led

to affirm, that the stomach cannot sustain, for a length of time, the weight imposed on it by the heavily distended arch of the colon;- and a continuance of this weight is likely to be followed by a malposition of the viscus;-, and is incompatible with a healthy and vigorous play of its function.

A costive habit is frequently the remote cause of hemorrhoïs, ædema, preternatural fluxes from the uterus, &c., which are consequent to the local irritation created in the rectum, and to the congestion, mechanically occasioned in the portal circulation. This congestion in the vessels of the portal system, increases the obstinacy of the obstruction, by operating, in its turn, as a cause.

It prevents the due supply of blood to the liver, adequate to secrete the necessary quantity of bile, and thus aggravates the existing disorder.

It is sometimes suddenly productive of the most dangerous of the acute maladies, namely,

illeus, and some forms of strangulated hernia.

Fissures of the anus, laceration, bleeding, fistula ani, are the occasional results of constipation.

Many of the anomalous and complicated affections of the viscera, of the nervous and muscular systems, owe their origin to the same common cause.

The experimental researches of C. Beirne have fully elucidated the pernicious sway of this evil, and have cleared many perplexing difficulties in the management of disease.

The mechanical obstruction of the first passages, cannot but be seriously prejudicial, by the pressure it is capable of exerting upon the descending aorta. The healthy ballance of the circulation is thus disturbed; and there supervenes irregular determinations of blood to various organs, according as idiosyncracy, or the existing predisposition may prevail. The brain is more frequently called upon to endure the hazard of this tumultuous, orga-

sm in the arterial system; and cephalagia, vertigo mental confusion, &c, are too often the prodromes of a fatal crisis. Very often, 'cordis palpitationem inducit', and the serious changes accruing therefrom, as hypertrophy, dilatation of its cavities, &c.

This brief enumeration of some of the more important evils of constipation, is doubtless sufficiently confirmatory of its pernicious agency.

The bladder, the kidneys, the liver, the lungs, and even the viscus within the cranium, are all subjected to more or less functional disturbance, either mechanically, or through sympathy, by the influence of feculent accumulations. It is emphatically a 'primum mobile' in numbers of those painful disorders, which have, until recent date, been the subjects of such conflicting opinions, so unpopular and unprofitable controversy. The original idea as to Tic Douloureux being essentially and exclusively a local affection, is now known to have been errone-

pus. The great doctrines then inculcated about it, have since been consigned to oblivion, an increment to the huge mass of discarded medical errors. The splendid acheivements of the last two centuries, have shed such brilliant light upon disease, that the treatment thereof, continues not a system of almost entire uncertainty, and guess-work, but has attained the strictness and surety of philosophical induction.

It is in the departments of anatomy, physiology, and pathology, that genius and profound research have been most liberally rewarded. The intimate, and most important relations subsisting betwene the great sympathetic, and the motor and sensative divisions of the cerebral nerves, can now be said, to be more thoroughly understood, and properly appreciated. Through this, we have been enabled to account clearly, and with satisfaction, the wherefore of those diversified morbid phenomena.

which have created so many difficulties in remediate management. Numerical statements, drawn from the experience of most able, and indefatigable observers, reduce to a certainty, that almost in nine cases out of ten of facial neuralgia, the primary cause consists of some derangement or disordered action in the primae viae.

Chas Bell says, "no man who attends to disease will deny the influence of deranged bowels, visceral irritation, in producing external pains, local paralysis, &c., In most cases, his efforts were immediately directed to the removal of irritating matters lodged in the inferior passages; and he declares, that since he has used this method, he did not fail, in a single instance, to remove the disease.

Abernethy entertained similar views on this point, and in his lectures strongly set forth the agency of intestinal derangements in the creation of remote local disorders.

Constipation is frequently an important diagnostic mark of disease. It often serves as the only symptom of itself in diseases of which it is the cause.

For instance, small masses of scibalae may accumulate at any intermediate point between the caput coli and the rectum, and there acting upon the chain of nervous sympathy, cause distant local pains.

And the coexistence of intestinal torpor indicates the propriety of purgation, which together with the administration of appropriate tonicks, have proved the most effectual method of treatment. Here the opinions of H. Mayo, and Dr O. Burne, conflict; but the former seems to have fully established, that obstruction, from hardened faeces, may occupy any portion of the lower bowels.

It is almost invariably an early attendant on organic diseases of the abdominal viscera, and manifests considerable influence in the promptness of their fatal termination.

It seldom fails to be present with the sedentary studious, literati, &c, and it is an inseparable adherent to the pampered individuals in high life.

All manner of indolence is eminently conducive to its formation, and where the one is, there do we generally find the other.

Second:— We shall now advert to an enumeration of the most prominent causes, which are calculated to engender it in the various classes, whilst in the pursuance of their respective avocations. The limits which we have anticipated in assigning to our thesis, include only simple constipation; and those irregularities depending on organic disease of the viscera, and abnormal obstructions of the canal, will, therefore be purposely omitted.

The greater number of trades demand almost the exclusive action of the superior extremities, and one position of the body. Artizans

are thus necessitated to assume, for many hours daily, bent positions. In addition to this, many of them are continually exposed to the inhalation of poisonous metalic vapours.

Plumbers, painters, smelters, makers of white lead, &c, suffer, at times, the most obstinate astriction, in consequence of the blasting influence, which that singular poison, (carbonate of lead) exerts upon the vitality of the bowels. The constrained and unnatural postures, with nearly continued bodily inactivity, create, in most men, only predisposition, a mere tardiness, without total failure of the natural propulsive force. However, if this be not counteracted by a judicious recourse to the laws of hygiene, it will ultimately acquire the strenth and pertinacity of a habit.

The sedentary class of persons may properly, and without any manner of exaggeration,

be presumed to comprise nearly the whole female world, and a greater portion of the males. For it is obvious, that the appellation of sedentary cannot be restricted to the studious as artificiers, such as taylors, shoemakers, watch makers, coblers, &c., are alike subjected to the same injurious influences. The uncomfortable positions which they are obliged to maintain, are decidedly unfavourable to that gentle downward motion of the bowels.

They have therefore, just claims to be included under the nominal title of sedentary humanity. They are incessantly suffering from constipation, and surely with little probability of a permanent relief, so long as these unsuspected causes, remain unthwarted.

The manner in which these causes act in generating the evil, is perfectly intelligible, if we consider the agency of the dia-

phragm and abdominal muscles in the phenomena of peristaltic action and defecation.

In the first place, by the continually relaxed condition of these muscles, the bowels are at once deprived of their valuable support and pressure, usually recieved. They are thenceforth constrained to depend upon their own resources, which though partially are not sufficiently adequate to mantain regular discharges. Secondly:- they are deprived of the assistance designed to be afforded to them, by the reciprocated actions of the diaphragm and the muscles of the abdomen.

And this is to be obtained in no other way than through the healthful employment of active exercise. Exercise too, not of one part to the exclusion of others, but of the whole body, and with a favourable co-operation of the mind.

Thirdly:- insufficient attention, to diet-

etic regulations, and to exercise, is followed by derangement of the natural functions, and thus secondarily increase the evil, and render the individual more prone to its influence.

These causes acting in concert with numerous other excesses and deviations from the laws of the animal economy, give such wide diffusion to costive habit among these classes, that it becomes the most common ailment to which they are subjected

And under this influence, we may not expect habitual torpidity of the bowels, but of all the functions, with a degeneration of health, and the establishment of permanent disease. It may be proper to offer a few remarks more minutely in reference to the sedentary studious. They not only favour the formation of costive habit, by a sedentary course of life, as do artificers, &c, but incur the penalty of another, a twofold agency. The long continued and exclusive action of the brain, demands a proportionate increase in the

quantity of vital stimuli; and this superabundance, is but a curtailment upon the necessary quota of other organs. The consequences of this infringement of organic laws, this want of harmony and equilibrium in the distribution of the fluids, may, I presume, be very easily inferred. The brain, ere long, becomes extremely irritable; its excitability is morbidly increased; and being continually influenced by an irritated action of its stimuli, it loses its tone, and finally sinks into a state of exhaustion and disease.

The mind, depending upon the instrumentality of the brain, suffers a corresponding deterioration, and the loss of firmness, with inaptitude for active and steady exertion, are the deplorable results.

Such follows as a natural consequence, the direct penalty of a violated law: which says thus: — where by peculiar circumstances, any organ is the seat of a praeternatural afflux of vital stimuli, it must suffer from an excess thereof —, and other organs

must incur a proportional derangement from a consequent defficiency;

When we view, in a healthy organism, the admirable harmony, the silent order, and beautiful precision, so strickingly displayed in the great circle of the vital functions; it fills us with wonder and amazement. Each viscus seems to be imbued with a sense of each others rights;— and to adhere to precise limits, in the exercise of their inherent vitality. Separately, fulfilling— each the peculiar object of its destiny— collectively, establishing a mutual dependance, uno verbo, a complete unity. When we contemplate this harmonious alliance, and learn the intimacy of their relations, and the importance of their integrity, we may then approach to a correct estimate of the mischief which would accrue from the operation of disturbing causes.

Some persons thus situated, and in despite of their regular exercise, and dietetic restrictions, are

often not a little surprised at a continuance of the intestinal torpor, nervous excitability, &c. which they are utterly unable to refer to adequate causes.

There are but few of them who reflect, that the praeternatural excitement which the brain is constantly called upon to endure, (even in the very act of exercise) is making serious inroad upon its vital energy.

The organ is kept in a continued state of forced resistance. The superabundance of its accustomed stimulus cannot be assimilated, and becomes highly predjudicial to its organization. It wears rapidly, therefore, from enfeebled vitality, following over excitement. Finally disease ensues, not only in this organ, but remotely, in distant structures, from the unnatural revulsion or vast curtailment of their quantum of blood and innervation.

Having succinctly enumerated the more prominant causes of this evil, we shall now enter into a consideration of the functional changes, vital

lesions, causa proxima, which coexist, and are inseparably connected, as pathological conditions, with the presence of the habit. It is remarked, in the last section, in reference to the sedentary studious, that whilst the equilibrium of the brain is disturbed from the excess of vital stimuli, the bowels simultaneously languish, and are torpid for the want of it.

The assimilative organs, thus deprived of their ordinary amount of stimuli from the blood and nervous system, must certainly incur debility and disease. Indigestion ultimately supervenes, attended with all its horrors, and it is maintained and aggravated by the subversive influence of constipation, upon the harmony of the vital forces.

The functions of the liver and the pancreas, in these instances, are inadequate to afford the necessary assistance in the process of digestion. The scantiness and bad quality of their secretions, are effectual only in promoting the obstinacy and habit-

ual character of the astriction. Healthy bile being the natural purgative in the expulsion of the refuse materials of our aliment, ceteris paribus, an interruption of its flow, or a vitiation of quality, must constitute a serious check to peristaltic action, which almost entirely depends on it. The original susceptibility of the intestina colon and rectum to the impressions of their accumulated contents, is always greatly impaired, and often entirely destroyed.

The secretory organs of the intestinal mucus, and 'liquor intericus', which are so essential to the mantainance of a proper consistence of the faces, and to the preservation of the natural sensibility of the inner tunics, will be found to be comparatively inactive: whence follows the prodigious collections of dry and indurated, ordure, in the cells of the colon.

The contractility of the canal, I conceive, may undergo considerable impairment, by a continued praetermatural distention of its coats: in the same

manner as the expulsive power of the bladder is weakened, by its parietes sustaining the distention of accumulating and confined urine. The muscular fibres of the bowels being thus enfebled, have not force enough to expel their contents. An impairment of the sensibility and contractility, may continue, for some time, without any appreciable disturbance in the secreting power of the mucous surface. A mere tardiness of the expulsive faculty, without the usual accompaniments of hardness and volume in their contents. Hence an individual may not have the slightest inclination to stool, for four, six, or eight days; and then, at the suggestion of a scarcely perceptible sensation, makes effort, and succeeds in relieving his bowels easily, and to his great and agreeable disappointment.

However, these secretions soon become altered and less copious, in consequence of the faeces collecting, and by their continual presence, irritating the

mucous membrane, and causing a state of congestion, or sub-inflamation, which is known to be decidedly incompatible with the proper action of secreting surfaces.

In some instances, the rectum and the sigmoid coil is so blunted of their sensibility, as to be aptly compared to a passive tube, suffering great irritation and distention, and not being stimulated, to the least reaction. The quantity of faces continuing to augment, and to impact, until having attained a volume which exceeds the dimensions of the outlet, can then only be dejected with pain and difficulty.

Is there any thing, in addition to what has already been said, more peculiarly and immediately concerned, in the production of a costive habit of body? We maintain yes; And remark in answer, that the artist, and others of the sedentary, while following their mechanical employments, and busily engaged in the prosecution

of their affairs; the studious, while anxiously filled with literary ardour, or profoundly imbued with the spirit of meditation; the female, whether indolently reclining in luxurious ease, or toiling daily under the obligations of penury, are, all of them, equally averse to an interruption, whether it proceed from the calls of nature, or from any other source.

Whilst thus severally engaged, they turn a deaf ear to nature, and chose rather to disregard her solicitations, than leave their business for a few moments. In this way the periodical callings are despised and neglected, until finally, they are compelled to resort to artificial aid, to procure them that, which they previously refused to obtain.

What are the consequences in thus protracting the performance of this important duty we owe to nature. The celebrated Bennett in one of his series of letters, truly says, "we thwart nature in a thousand instances, and in as many, she re-

taliates the offence". In truth, if we do not immediately attend to these daily inclinations, probably occuring in the morning; and if by necessity, business, or through sheer negligence, we repeatedly suppress and procrastinate the expulsive efforts, at these periods; it will soon be apparent; that the delicate sensibility, which, a priori, so quickly excited contractions in the muscular fibres of the inferior passages, and caused the immediate expulsion of their voluminous contents, is now totally inadequate, and nearly extinct.

That periodical notice to assist in the discharge of wast material, which we received with such undeviating punctuality, is ere long, but faibly and irregularly indicated.

The bowels may continue, for some time, in this state of comparative inactivity; and if, to this indifference to the natural calls, there be subjoined a dry stringent regimen, defficient

bodily exercise, with the various conditions already noticed, as peculiar to the mechanic and to the studious, we may expect costive habit to strengthen, and eventually, to become estat lished.

Finally under the division of causes, we consider high atmospheric temperature, as capable of exerting a very controling influence upon the activity of the viscral functions, - and more especially upon those of excretion. A centrifugal force, (if I may so express the idea, without an infringement upon the laws of rotation) seems, in some degree, to be established in the fluids.

The skin then constitutes the prime emunctory for the emission and expulsion of superfluous humors. The vast extent of its whole surface, which is estimated to exceed in a man of average size, 2500 square inches, well adapts it for the emergency of compensating, by vicarious action, failures in the offices of the kidneys, bowels, and lungs.

The ingenious experiments of Lanctoins, and subsequently, of Lavoisier, and Seguin, have resulted in the discovery, that the skin is capable of eliminating from the body, ~~much more~~ solid material, ~~than~~ the united excretions of the kidneys and bowels. Now there is an intimate association, or consent of action existing between these channels, or between the exterior and interior of the system.

We see this sympathy speedily and powerfully manifested, when, from external causes, any one of them, is interupted in the performance of their respective functions. Wherefore, under high ranges of temperature, an increased activity of the cutaneous function, is accompanied by a corresponding decrease in the exhalation from mucous membranes. And consequently, if there be no co-existing disease, or functional disturbance, the depository portion of bowels, is apt to become charged with collunies, concomitant with habitual torpor

of their downward movements.

We come now to the third division of our subject, wherein is considered the treatment, which we presume to suggest as adequate, and peculiarly appropriate, for the removal of simple constipation. From the preceding remarks, it is perceived, that the evil in question, in its simple and uncomplicate form, is dependant immediately upon one or other of the three following, essential causes.

"Either the secretions are wanting, of which combined with the refuse of the aliment, faeces are formed; or, faeces being formed, there is not liquid secretion enough for their expulsion; or, the faeces being of a proper quantity and consistence, either they are not of a proper quality to stimulate the bowels to action, or the muscular fibres of the bowels being enfebled, have not the power to expel them." It has been shown, that these functional lesions are caused by unavoidable circumstan

ces of vocation, and by inattention, and neglect of certain duties. Now it is our desire to explain, in as clear and concise a manner as our slender ability, and contracted experience will allow, the means, wherewith the languid powers of the bowel may be temporarily exalted, and strengthened, and made adequate to effect easily, their own relief.

These means consist not in the administration of artificial stimuli, which by their direct impression, afford but a temporary impulse to the sluggish motions of the canal; but they rest upon the influence of nervous excitement, steadily maintained by the power of volition, — concentrated, and under the guidance of an attentive mind. They pertain to the establishment of another habit, 'habitus regularitatis', which, by its counteracting the original one, gradually weakens, and in end, eradicates it.

The means and resources, which have been

provided for the attainment of this object, constitute a necessary part of our organization.

This inherent power of the will upon the bowels, manifested in controling and originating their movements, is ample, beautifully adapted, powerfully efficient, and in the possession of every individual.

There are few however, harrassed by costive habit, who are aware, that nature, in connexion with other provisions, hath a "vis medicatrix" for the removal, even of this evil. Many persons repeatedly undergo medical treatment, for the restoration of a supposed torpid liver, to start the secretions, to accelerate the tardy movements of the gut; whilst thousands are incessantly swallowing the miserable productions of quackery — now like a deluge, overspreading our land, and inflicting a proportionate degree of Injury upon the dupes of their vain pretentions.

The circumstances causative of this sing-

pular and infatuated predilection, as evinced by the great mass of the people, are principally owing to the prevalence of constipation, which doubtless has better claims to universality, than other complaint, now noticed upon the catalogue of diseases.

This flagrant impositions upon the vulgar Judgment, and consequently upon the general health, as practised by designing men, (whose sole aim and glory pertain not to the benifit of their fellow-beings, but to the repletion of their pockets,) have succeded amazingly, and to a lamentable extent. For no sooner do these persons, women especially, experience a little difficulty in the water closet, than they commence with their "aloedarium", or flee immediately to Brandreth, or to the "vegitable pill",

This abominable custom, is not only highly prejudicial, from its tendency to destroy the natu-

ral powers of the bowels, but also operates very favourably upon the interests of the famous pill, — as one dose, absolutely induces the necessity of another.

It is apparent then, that we would vainly expect a speedy and permanent success, if, in our efforts, there be an exclusive reliance upon the production of artificial excitement. We could though, with great reason, depend upon effectually supplanting the evil, by the antagonistick habit, which has been mentioned; if our aim be directed to raise the almost extinguished sensibility of the parts, and thus restore to them, their original susceptibility, to the impression of fæces.

In what manner are we to raise this irritability? How is the defficiency of the liquid secretions to be repaired? How may the requisite characters of consistence and quality, be impressed upon the fæces? To these queries, we adduce the following answer, which includes all, and

from its bearing upon certain unchanging laws of the economy, and from the extent and frequency of its demonstration, is presumed to be correct.

If there be a remora, or an indurated state of the contents of any portion of the lower bowels, and the individual is sensible and ponders upon the necessity of their evacuation; if his attention is fixed thereto, with a willingness and anxiety; there is then a transmission of nervous energy to the seat of obstruction, and the sensibility, and other vital conditions of the part, greatly augmented.

In consequence of this, there succeeds copious secretions of mucus, the 'liquor interiens', and lastly, burning sensations, uneasiness, desire, contractions, and stool. The same thing obtaining, and a similar effect is induced, if from causes already enumerated, there be merely an enfebled state of the muscular fibre, without the presence of the dry, scybalous faces.

These statements recieve additional plausibility, from the remarkable influence, which the mind may exert over other functions. The vital motions may incur lesions, and even fatal interruption in some conditions of mind. The senses, and especially those of hearing, seeing, and tasting, in their variously modified actions, are imperfect, except they recieve the cooperation of the attention. The voluntary power sometimes acquired over the stomach, can disgorge, at will, the ingesta of a debauch, and unrestrained indulgence. The bladder, can, by training, be placed so perfectly under the government of volition, that the smallest quantities of urine, may be discharged at short intervals of time.

By the way, this fact, did it recieve the attention which it merits, would prove eminently useful as a prevenative, from the miseries of gravel.

For I am firmly persuaded, that if care

were observed to empty the bladder of its contents, every night and morning, and then during the day, with a frequency proportioned to the existing diathesis, — deposition and agglutination would be of rare occurrence.

For the sake of a clear explanation of these important phenomena, we take the liberty of again referring to the fact, that constipation may occupy any compartment of the great intestine; but that the rectum and sigmoid flexure are generally the seat of the obstruction. It is within their walls, that those huge masses of dry, hardened faeces are formed. The peculiar sympathy which calls into play the auxilliary powers of the diaphragm and the muscles of the abdomen, is unexcited; and the rectum, instead of a an outlet, becomes a reservoir, for the accumulation of faeces. The frequent ineffectual attempt of the individual, to procure their expulsion,

by physical effort, excites the perturbation of mind, which is hinted to on another page.

Now in this state, when the mind is disturbed by oppressive sensations from the body, and filled with anxiety and disquietude; the inquiry arises; what are the changes which the parts undergo in the immediate vicinity of the obstructions? Or, in other words; how do the conservative efforts of nature, effect her restoration?

This interrogation has already been partially responded to; and the following is presented in completion of the answer. There is an exalted innervation. The follicular structures and secreting surface of the part, receive a more energetic stimulation from the blood and nerves.

Their secretions, which are then poured forth in abundance, are absorbed by the faeces; and thus, the indurated stercoral matters, are broken down and dissolved. The mucous mem-

brane, through its accumulated excitability, feels, at once, the stimulus of the fluid faces; and by arousing the sympathies of other powers, enlists their aid, and soon overcomes the resistance of the sphincters. It is through this beautiful operation of the mind upon the organic laws, that nature can revive the flagging energies of a function.

We find here the best "peristaltic persuadi", Through it, we may permanently remove the most obstinate costive habit, when apparently naught, but the continual use of cathartics, would avail. This voluntary or inherent power will increase in strength and efficiency, in proportion to the regularity and frequency of its appliance. I see no reason why, the bowels may not yield and become as subservient to volition, and to the emotions, as the stomach or the bladder, which are likewise thought to be altogether involuntary functions.

As the mesmeric operator renders his ecstatic influence more, and more powerful, by repeating, at short intervals, his manipulations; so the will, through practice, becomes more active and influential, in its control, on the bowels. The will is not to be considered, however, as constituting the only essential agent, in this conservative action. The will to do it, is certainly necessary; for without this, the elicitation of the bodily effort, is not made. A mere willingness is inadequate, nor can it accomplish the object, except there be anxiety, or emotion, or a concentrated action of the mind.

This influence will be more speedily successful, if it be brought to bear upon the bowels, during the act of exercise, and immediately after a meal. Habits of bodily exercise, at these periods, id est, directly after the morning and evening repasts, should be attended to, and by no

means neglected. A walk out of town, in the country, or of a few squares, in the city, will, by the pressure from the muscles, and the distended stomach, very materially assist the efforts of the individual. He must, at this time, with a scrupulous indifference to external objects, steadily direct his will, the attention, the whole mind, to the rectum or seat of obstruction.

In this way, faint and feeble desires, may be rendered more intense and vehement; or if there are none at all, they may be originated; and the requisite characters, at once impressed upon the faces.

We perceive, in conclusion, how, by a judicious and persevering application of this power within us, we may destroy the habit of constipation; and establish, in its place, the regular habit, which is in accordance with the laws of nature. The habitus regular-

itatio may be so trained and nurtured, as to answer to its stated periods with undeviating strictness, — yea, true to us, to the very hour, if we be true to it. Indeed, nowhere in the whole range of vital actions, are we enabled to detect a more strict regard for periodicity, than is manifested in the function of defecation.

"Habit is one of the causes that have most influence upon the regular return of the excretion of the faces; when it is once contracted, we may go to the water-closet exactly at the same hour." (Magendia.)

"All the bodily functions are capable of being influenced by, and subjected to, habit.

Nothing conduces more to the healthy action of the bowels than attention to this principle.

By observing regularly the same period or periods in twenty four hours for the relief of the bowels, whatever has been formed or accu-

mulated in them is found to be prepared at the recurrence of those periods for elimination, and to have been brought to the rectum for that purpose." (Mayo.)

I hoped to be excused for the presentation of a lengthy detail, especially in relation to cause and effect; but to have dismissed the subject without conferring upon it due attention and consideration, merely to preserve a brief thesis, could certainly, not have been justified by medical propriety, and medical usage.

J. C. Kinkle.

An
Inaugural Dissertation
On
Pneumonia
Submitted to the examination
of the
Provost Regents and Faculty of Physic
of the
University of Maryland
For the Degree
of
Doctor of Medicine
by
Alexander Matthews
Feb.y 8th, 1847

In the satisfaction of those requisitions, exacted at my hands, in effectuating the purchase of my Diploma, I have in the fulfilment of one of these, made the object of my choice, as the subject of my Thesis, that malady, which is fraught with interest, demanding the strictest attention of the Practitioner, chiefly from the circumstances of it being the object of ignorance unfortunately among Physicians, as also the frequency of its occurrence, among every people, the delicacy and importance of the organs which are the subject of its ravages, and the rapidity of its march to irrevocable destruction, these enumerated circumstances inevitably conduce to the conclusion, that this disease, is one not less fraught with interest, nor demanding less the attention, of the Practitioner, than any which man experiences, that to which I

make reference is that chief of the diseases of the Lungs, (including only those of an acute character) Pneumonia.

The confusion with which it was enveloped, throughout earlier ages, was in degree so intense, that its nature and character was to the mind of the Physician as a dense dark cloud, and thus was it circumstanced until the arrival, of the immortal Laenec, armed with the products of his keen perception, and profound wisdom, by them to dissipate the dense darkness and ignorance, and create the life of that perfect clearness and knowledge, which men are capable of having the inheritors now.

Until the arrival of the period when the state of the knowledge, of Thoracic diseases, was the subject of such a reformation, Medical

men, knew little of the, Individual character, seat, &c of Pneumonia, Bronchitis and Pleurisy, The idea of those differential marks, which so clearly and with so much facility make the diagnosis of these diseases, being, so long engrossed in ignorance, is to the Physician at present strange and appalling.

Pneumonia is a malady taking for its location the substance of the Lungs, distinct from the investing membrane, and lining of the Bronchial Tubes even to their minutest ramifications, the disease proper being the that denominated the Parenchyma, Its appellations were Pneumonia, Peripneumonia, and Pulmonitis each and all answering as the denomination of the same disease, at the present day there, exists and is recognised but one appellation,

and that Pneumonia.

Statistical observations and investigations, declare that, the right Lung, is in greater frequency the subject of attacks of this disease than the Left, a circumstance in contradistinction to the Lung attacked by Phthisis, Next that portion most frequently, visited, is the inferior portions, succeeded by the upper portions, the middle portions of the lung, rarely showing the disease situated there, The periods of life during which man is in a greater degree liable, to its visitations are early life, it being, more frequent in children, then there is observed an interval of immunity, when with the years of early manhood there returns an accompanying predisposition, to its ravages, Observation marks its increased frequency in the

Male Sex, which receives, explanation, from circumstance of the Male Sex, being constantly exposed to the exciting causes, This cannot fail to be credited, when we recognise the perfect equality in its visitations upon the two Sexes, in such countenanced custom and habit admits of the great exposure of the female sex, This renders the circumstance sufficiently explicit, There exists not the People from the ravages of which they enjoy an immunity, such and the liable to its visitation, the warmer and extreme cold regions being in a greater degree than that, intermediate in temperature, exempt from, its attacks.

The Spring Months of March. April and May are, more prolific, in the production, of this disease, than are those of the fall and winter.

The alterations, which the visitation of this disease, effects upon the Lung are in their nature, of an intensely grave character. It, spoiling and rendering useless their delicate structure, That portion of Lung which is undergoing the first stage of this disease, or that denominated the Stage of Engorgement, presents in its external appearance a red aspect, upon, effecting a section, a like appearance is presented upon the cut surfaces, the blood vessels are in a state of intense congestion, upon examining, the portions, that peculiar normal sensation, denominated crepitation, is instantly, observed to be impaired, there being conveyed the idea, of the presence of a greater quantity of fluid than air in the vesicles, The Lung is increased in density, and weight, not so perfectly floating upon the surface of water, Its strength is in degree much diminished

as is approved by a separation of its particles being, more easily effected; upon an. impression being made in any portion of it, recovery to its former state, is assumed to be tardily and imperfectly performed.

Also, there is perceptible upon the surfaces of an inversed portion, a liquid presenting a red and frothy appearance, and presenting much the appearance of serum strongly imbued with blood,

When transition has been made from this stage to that, denominated the Stage of Red Hepatisation, the appearances are something of a different character, the feeling of the lung in this is a perfect absence of the feeling of Crepitation, the air vesicles being obliterated and opposing the entrance of air, there is increased, weight, density, friability, and total incapability, to remain upon the surface of water, the flowing liquid, from the surface of the cut

portions is in appearance not so intense in colour, there being exhibited in it none of the redness of prothinels, the colour of the lung is occasionally of a homogeneous appearance, but more frequently, it assumes a mottled aspect, there being spots of intense red, and others of the same colour, having that appearance in a minor degree, the former being the charged vessels and proper substance of the lungs, the latter being the areolar tissue holding and sustaining the portions of the lung together. The third stage, denominated Grey Hepatisation or pneumonic Infiltration or Grey Softening, is the stage, consequent directly upon that last mentioned, the colour is in character, grey or that resembling straw, its consistence and strength are much diminished, as when taken in the fingers, complete reduction may with facility be made. It presents

the appearances of those of the last stage in an advanced degree;

The presence of an abscess in the lung being found as a result of Pneumonia is a circumstance of extreme rarity, those the consequences of Phthisis and Phlebitis, have, occasionally been, attributed to and the work of Pneumonia, But, the, extreme effect of softening from the centre of the abscess, characteristic those attendant of Phlebitis, and the presence of tubercles in other portions of the lungs, determining the tubercular cavity, thus are there furnished evidence whereby, the true character, of abscesses succeeded at upon Pneumonia, may be determined, Gangrene rarely proves as a termination of Pneumonia,

And lastly, may be observed, such circumstances, as are, recognised as the causes of Pneumonia, being those denominated Predisposing and Exciting

and those of the first kind, include among their number, all avocations peculiar to men, much exposed, to the weather, chiefly those of the Laboring Class, all trades, public declaimers, and employments involving much in exercise the Lungs, all predispose to the inception of this disease, such as we have mentioned are denominated the Predisposing causes, The Exciting Causes being few in number, and uncertain, All Mechanical violence, are certain in the production of Pneumonia, The bites of certain reptiles, as the Rattle-Snake, Copper head &c, are almost inevitable, in the Production, of Pneumonia as a consequence, That most constantly, and frequently acting as a determining cause is the pervasion of cold, and this persisting combined with a degree of moisture,

such being more effectual in the production of Pneumonia, than the extreme sudden vicissitudes, of temperature, this latter is strikingly verified, by the custom of the Russian, in leaping from his steam bath and plunging his body with impunity in the snow, the same circumstance may be useful also in explanation of its greater prevalence during the Spring than the Scale in Winter months, the atmosphere during the former being more perfectly saturated with moisture than are the latter, cases at times presenting themselves, and defying the powers of the Physician to ascertain the cause, as the exercise of every care, proves occasionally ineffectual, in the arrestment of the disease,

In pursuing the consideration of the symptoms of the disease, I make

Mention of two species, those termed general and others the direct or local, Experiences, more frequently, declaiming those of the first order, to anticipate, the appearance of those of the last order, denominated, the direct symptoms, The general, symptoms are those composed of a feeling of general indisposition, occasionaly disorder of stomach, a great sensitiveness to impressions of cold, in some instances, a perfect chill, is experienced, by the patient, followed by fever, but frequently, substituted for the chill, there are frequent feelings of chilliness, These above mentioned sensations, very frequently anticipate, the entrance of those direct, symptoms, characterizing more perfectly the disease, And again the patient, suffers, alone and sensuspectedly, those direct=

or local symptoms, without the previous appearance of the general symptoms; these last constituting the direct symptoms, are pain Dispnoea, Cough, Fever, and the peculiar expectoration, These last signs, are characteristic (the last one bearing an exception) of all of the acute diseases of the Lungs, The pain experienced by the patient, has its location either under the [illegible] Mamma, or in the direction of the base of the Lungs, The point of the pain suffered does not determine, coexisting inflammation in the same neighborhood, As when disease has been located in the apex of the Lungs pain has been referred to the base of the Lungs, and the Inflammation of one Lung, has been observed, to have the concomitant

pain referred to the Lung, free from disease, During the first periods of the disease, the character of the pain, partakes of the nature of that present in Pleurisy, finally however, a change takes place, the sharp cutting sensation, is succeeded by that of dullness and oppression, created by the interstitial effusion and blocking up of the Substance of the Lungs,

The Dispnea, is not commonly the the source of much discomfort to the Patient, the respirations in frequency varying from 30. to 40 and even more per minute, The Respiration is that denominated Laboured respiration, the Lungs not being at any moment collapsed and in consequence also, by deep breathing enough, and thereby pain being created, The lungs

are constantly maintained at a certain degree of tension, upon breathing the patient, heavily breathing, the, chest, would imagine this to be a source of much discomfort, but astonishingly, the patient complains not of it, and is not in the minutest degree, impeded in furnishing answers to the proposed questions, he appears totally unconscious of the degree, to which his respiratory function is exercised, The patient presents, a sallow, and livid appearance, and occasionally the extremities, are in their appearance purple, these appearances, originating in the deficient oxygenation of the blood, in consequence of the impaired function of the lungs, There is observed in the appearance of the chest, a mark, peculiarly characteristic of this disease,

and by some a mark strikingly pronouncing the existence of Pneumonia and what is the extreme degree of expansibility of the alae of the nose this when observed by some individuals, previous to the further investigation of it, induces the belief that Pneumonia is present,

The Cough is in this complaint not the source of much trouble to the patient, not easily induced, nor are its paroxysms, of any duration, it seems to be not but a trifling degree of discomfort

The Fever unlike the Chill is never absent, as the smallest portion of lung involved, induces a very perceptible degree of fever the pulse is frequent, large, and hard at other times it is small and compressed, a circumstance, which should prompt the Physician

to discriminate, from the pulse caused by debility and feeble-ness, as the pulse, referred to, while when full investigation has been effected, be recognized as the consequence of an extensive portion of the Lung, being involved and compressed by disease, and when, there seems to the Physician, the pulse characterized then may suspicion, spring up, of the existence of much disturbance, and experience will recommend the prompt application, of that, excellent remedy the Lancet, ~~The pulse~~ ~~blood~~ furnishes the appearance, of an extreme degree of weakness ~~[illegible]~~, being abundantly, furnished with Fibrin, the tongue, teaches not so correctly of the degree of inflammation, as does it of the state of the general system, and its secretions,

The last and last symptom for mention is one extremely important in the investigation of the disease, its character and appearance, revealing the character and intensity of the disease, and the appearance of which, alone, declares emphatically the kind of disease, when the disease is in its incipient stage, it is not manifested, finally, it is transparent in appearance, glutinous, and transparent, resembling a solution of Gum Arabic, being like the expectoration of Bronchitis, As the disease effects its advance the consistence of it is much altered, it becoming intensely viscous, and curved, being found collected, in the vessels in the lungs and, upon its cessation, it still adheres, to the bottom, Another marked alteration, is the change

of its colour, concomitant with the increase in viscidity, is then observed, a minute yellow, or pink tinge, which bears an increase in intensity, until there be attained the deepest red, with the course of the disease. There may be noted a passage of the appearance of this sputa through all of these gradations, from the slight yellow to the intensest red, this colour is derived from the exuded blood in the bronchial vessels, admixing with the secreted mucus, the like appearance may be manifested, by forming a combination of brick dust, or Carb. of Iron, with a solution of Gum, Arabic, and thus simulate, completely the peculiar rust coloured expectoration, the suppression of this expectoration is to be noted with fear, as it is cear-

ted, by the debility of the patient, not having power to cast it up, or by reason of its intense viscidity, the accumulation which it thus effects, compressing the lung, destroys life. Another peculiar appearance of the expectoration, is that, resembling a solution of Liquorice or Prune juice, such a manifestation, almost positively, declaring the existence of the third stage, or that of purulent infiltration, this terminates or remains upon the symptoms.

As, we stated, these were, these conditions, or states of the Lungs, induced as the effects of Pneumonia, in likewise are these, these, orders of evidences, confirming the these, individual, conditions.

During the stage of Engorgement, pneumonia, offers but little

to our power in investigating the disease, unless there be an extensive portion, involved, and then, by comparison, we can, appreciate the difference, But if we make the application of our ear to the chest, we discover impinging upon it, a minute dry, crepitating, crackling, sound, this noise, is, considered as Pathognomic of Pneumonia, and the existence of which can only be appreciated at the termination of the Inspiration, the expiration, remaining pure and wholly, free from it, the respiratory murmur, is by no means sufficient but may be heard, mingling with it,
The production of this peculiar sound possesses, two different explanations as offered by different persons,
The one attributes, it to the passage of the inhaled air, pursuing its course in the air vesicles, through the

therein contained fluid, the other is referred to the stuffed substance surrounding the vesicles, pressing upon them and thereby obliterating them, by bringing their parietes into apposition, these parietes having spread upon their surfaces, an exhalation, of a viscid character, yield to the pressure of the inhaled air and thereby separate, such separation, giving rise to the above mentioned, peculiar, noise, so indispensable, and characteristic of the disease, Pneumonia,

If it has continued to effect an increase, in severity, percussion will render a perfectly dull sound not however, equaling the flatness of sound, observed in Pleurisy, The application of the ear to the chest, will appreciate a whispering or blowing sound, termed

When a Bronchial respiration, the, exercise of the Voice, will exhibit a striking increase in resonance, there being appreciated the utterance of indistinct, words, this sound denominated Bronchophony and the last mentioned are with increased facility, remarked accordingly as we, examine near the root of the Lungs, The thoracic, transmitted by the consolidate portion of Lung, also exhibits an increased degree, the last three, evidences, mentioned, by their absence, together with the presence of the peculiar, sign of Aegophony in Pleurisy, prevents, the confounding of that disease with Pneumonia in consequence of the presence in both of dulness, on percussion. There is not in the posession of the Physician, any means whereby, the

learns, positively of the arrival of the third stage, when there is noted by the Physician evidences of increasing debility, cold clammy sweats, in conjunction with the expectoration of the dark coloured liquid, then may he infer, with accuracy the existence of the third stage. If there has been suspected the existence of an abscess, by the softened condition of the lung, evidence is obtained by the signs of a cavity.

If the disease after having reached the state of induration recedes to resolution, we discover the Bronchial sounds yielding and the crepitation, being manifested, both in inspiration and expiration, unlike it when heard in the early periods of the disease. This crepitation, finally yields to

The pure respiratory murmur, after the attack has apparently passed away, examination, with stile for a long period appreciates the existence of a degree of crepitation, which as long as it is heard, strongly predisposes to the recurrence, of a second attack,

The occurrence of inflammation in a few lobules and there seated in the interstice of the lungs, renders the appreciation of the physical signs, resulting therefrom difficult, the diseased portion, having healthy, spongy lung circumscribing it and shutting out all evidence, of, disease,

In the healthy lung, we distinctly recognise the increase in the respiratory murmur,

The mortality of this disease bears an increase, in the third &

Second stages; the are secondary attacks; such as seen in the adynamic and impaired constitutions; and as observed; among those, suffering from the evils of poverty; an extensive portion of Lung, involved in the first stage of Pneumonia, renders the prognosis, superior in gravity, to a portion minute in extent, involved in the second stage.

There are existing, two diseases with which, it becomes the Physician, the exercise care, in not confounding Pneumonia, and they are known as Pleurisy and Bronchitis. In Pleurisy and Pneumonia, those Symptoms as common to both are, Fever, Pain, Cough, Expectoration, In the former of these affections, the Inflammatory evidement, in degree, is slight whereas

in the latter there is much fever when compared to the extent of lung involved, In the latter, on smaller extent, involved in disease creating, much inflammatory excitement, In the former percussion, elicits, an intensely dull and flat sound, auscultation, exhibiting, in a diminished degree the Bronchial Sounds, and ~~Palpation~~ ~~the voice while~~ In the latter, Percussion, exhibiting, slight dulness, compared to the extent of substance implicated, and Auscultation, evincing the latter above mentioned, signs, in a reversed degree of intensity.

In Bronchitis, Percussion, teaches, nothing, perfect resonance, being, manifested, the sign, detects, in the base of the lungs, & upon both sides, a large

moist crepitating sound, the peculiarity in the sounds of the Bronchial Tubes, being that of a sonorous and hissing character; whereas in Pneumonia, more generally upon one side, the senses remark a dry fine crepitating, noise, and much obtuseness, in the Bronchial sounds. In Bronchitis, the Expectoration, presents a constancy in character, being of a whitish, transparent, and glutinous, character, In Pneumonia very briefly the Sputa, undergoes, an alteration, from the Catarrhal, character to that pathognomic, of Inflammation, of the Lungs, its viscidity and rusty hue, being clearly exhibited, such as have been presented are the prominent differential marks, of those two

diseases, in a greater degree, more liable to be confounded with Pneumonia,

In the treatment of Pneumonia, that measure, which when sufficiently early, availed of, by the Physician, and in sufficient quantity, proves to be of value in nature almost infinite, is Venesection. In Pneumonia the degree to which it is practised, by some disastrously and appalling, whereas the timidity of others forbids and prevents its application, sufficiently, as may gratify the wanton of the disease, the early and free application, being the means of effecting a perfect suppression, and extinction of it in some instances, but if too great progress, has been in a two great degree been effected, it can only

tance as it were the character of it checking the swiftness, and capacity as also its intensity, by diminishing the quantity of the circulating fluid and the opposed function of the lungs, The next great and useful means in the treatment of this disease, is Antimony which, early employed as an accessory to venesection, porsues the recognition of a measure of excellent value, The above mentioned, remedies, are impressed with a character, of unexceptionable excellence, and a utility indispensable, in the treatment of this most hazardous complaint, when their use is practicable, and indicated, in no instance should they be wholly discontinued and mercury (which in a third degree of importance is useful in the treatment) be amb=

ceed, when the inflammation has acquired, a great degree of intensity, and made much progress; then should the antimonial treatment be mingled with the mercurial, but much should be the consideration, and full the examination of the case previous to the total discontinuance of the Antimony and bloodletting such as I have mentioned constitute the basis and prime materials of the treatment of Pneumonia, viz Bloodletting general & local first in importance followed by Antimony & Mercury, Any peculiarity of the case from complication or otherwise receives a modification of the treatments it being limited in degree by the judgement and discretion of the Physician, As what has

been mentioned in relation to the Treatment, has embodied within it every thing of an important nature, & discontinuance of the mention of the meteor points in it cannot be regarded as improper, brevity,

An

Inaugural Dissertation.

On Inflammation.

Respectfully submitted for Examination.

To the
Provost. Regents. & Faculty of Physic

Of the
University of Maryland

For the Degree of Doctor of Medicine

By

John S. Chapman

1847.

In acquiring a knowledge of the theory and practise of Surgery, extensive reading is not only beneficial but absolutely necessary, before we can practise with success, or understand the true intention and application of our remedies; yet, for the mere beginner to commence his studies by plodding through volume after volume, forgetting, as he must, in the multiplicity of description the very facts he is anxious to acquire, is not only overloading the understanding ere it can form a judgment for itself, but it is a sad loss of time, and a great source of perplexity and confusion. While the mind is young in knowledge, let us remember its powers of comprehension are but weak; and, since the study of the medical profession generally includes such a variety of subjects, alike extensive & alike wrapt in the mysteries of doubt, rather should we first be taught the ruling principles, and then, when we have devised a perfect-

knowledge of the outlines, we may safely venture to drink deeper of the science, and be better prepared to meet the baffling sentiments so universally presented in all medical & surgical works, likewise our duty to recollect that hereafter we are to hold responsible situations in life, and if we neglect to embrace every opportunity of instruction, we will probably be called upon to equalize the consequences by a painful reflection of our incompetency to meet the claims upon our publick character. Therefore, may we take encouragement, and search indefatigably after science, and however difficult and unbounded the prospect may appear before us, we have only to pursue one even path with patient industry, and we will never fail to secure an honourable passport to the ultimate advantages of our professional studies. With these few outlines, I will submit to your consideration my opinion, upon the subject before you

Yes, Inflammation,

Inflammation. Pathology. 3

By Inflammation, we understand, the state of a part, in which it is painful, hotter, redder, and somewhat more turgid than it naturally is. which symptoms when present in any considerable degree, or when they affect very sensible parts, are attended with fever, or a general disturbance of the system. four signs commonly attend it, viz redness. pain. increased heat and swelling. These are styled the local signs of Inflammations, and are probably present to some Extent in every Case of the disease, whether situated in internal and deep seated or External and Superficial parts of the body; and it is the concourse of these four symptoms. that points out a Case of disease to be one of Inflammation. But no Correct opinion, Can be formed in regard to the Extent or Even the Existence of a Case of Inflammation, situated in parts which are beyond the sphere of tact and vision, from the four local signs solely, the question then arises what other symptoms are we to be governed by in Cases of such Extent, as I have

expressed local symptoms will not give us an opinion. I will mention another set which usually accompany Inflammation of an important part; I mean the symptoms arising from the sympathetic disturbance of the general system:- but perhaps I am progressing too fast - I have not given you the nature of the four local symptoms which I shall now proceed to take up. (First) - Heat. this appears to be owing to the increased velocity of the circulation and quantity of blood passing through an inflamed part But as the velocity of ~~xxx xx xxxxxxx~~ the circulation in the smaller vessels at least is soon diminished and is succeeded by congestion. retardation, and ultimately, in the progress of violent Inflammation, and by stagnation of the fluid in the capillaries: and as the heat under such circumstances is still occasionally found I believe, to be a symptom, or at all events a matter of complaint with the patient, it follows that we cannot refer the sensations

of increased heat, entirely to an increase of the vital contractions of the vessel, it is very probable that this symptom may be, in part owing to an increase of the vital actions of the nerves themselves, to whose agency we may in some measure ascribe the generation of animal heat under ordinary states of the system. In Inflammation of internal and deep seated organs, any local development of heat will seldom unless probably in Inflammations of the membranes investing the different viscera, or lining the cavities, be rendered obvious to the practitioner, neither will it in general be complained of by the patient although ever were it otherwise, his feelings must not be taken as any criterion of the degree of increased temperature, Heat, as a symptom of Inflammation, is probably most complained of, and most developed, in inflammation of the skin (such as Erysipelas, also in fibrous structures (gout and rheumatism) Redness) This is owing to the injection of the extreme vessels with red blood which formerly carried only a colourless

fluid, and to an increased quantity of blood in the inflamed part, while at a later period of the disease the redness is still further increased by the occasional extravasation of a portion of blood into the surrounding textures. The redness arising from inflammation is more intense in those structures which are naturally most vascular viz. mucous membrane, skin glandular and parenchymatous organs, But although increased vascularity and redness of the tissues are probably always present in Inflammations, they cannot of course be available for the diagnosis of inflammation of internal parts. The redness is of the vermillion hue, in the early and active stages of Inflammation, but assumes more or less of the modena or serous shade in the later stages and in Inflammation proceeding to gangrene the shade becomes still darker the part which falls into this state ultimately a black or greenish black colour, But in chronic Inflammation, and in those which occur

during states of great depression of the vis. vitae (for example) those which arise in scrofulous Constitution in Idiopathic fevers — from action of poisons and other specific causes) the redness exhibits from an early period much more of the venous than the arterial hue, Swelling) this symptom is ascribed to the distended and injected state of the Capillaries, (we have it by some that it is caused by the increased quantity of blood and subsequently by the effusion of serum blood lymph and pus — most remarkable in loose textures — breast — testicles & lymphatic glands) (Quit) the swelling from inflammations is most observable where the cellular tissue and compound organs, into which cellular tissue, enters largely as a component part and also those organs and structures which possess numerous blood vessels, mucous, membranes - liver & other glandular bodies - it is least observable in dense & unyielding parts, serous fibrous and bony textures. this symptom like the

two preceding may appear independently of inflammation, for it may be owing to the congestion of the vessels or simple transudation of blood or serum. Lastly, Pain this is owing to a stretching of the nerves by the distended blood vessels, or unusual pressure which is exerted on the nervous filaments by the distended capillaries in situations unfavourable to their expansion, or to the escape of a portion of their contents; and also to an exaltation of the vital actions of the nerves. Pain, or at least an increase of the sensibility of a part, amounting to a feeling of tenderness when moderate pressure is applied, is the most important of the local symptoms of inflammation; and indeed, when the disease is situated in an internal organ, it is the only one of the four local symptoms which can aid our diagnosis. A fixed and enduring sensation of pain, or of tenderness when found in conjunction with other symptoms which still remain to be noticed

is a very sure indication of the existence of Inflam—
But this like all other local signs of Inflammation
may mislead if too much relied upon; for
in many important Inflammation (of the
lungs and mucous membranes, for Example)
it is ~~by~~ very little felt, while it is a most
~~prominently~~ prominent symptom in certain
affections of the nervous System of a non
Inflammatory nature. The affections to
which I allude constitute a variety of
Spasmodic diseases, traced to some temporary
source of irritation physical or mental
I might say frequently a Combination of
both. In some instances the affection is Confined
to a single nerve, I have reference more
particularly where filaments ramify through
the tissues of organs. (Peritoneum Pleura, lungs
stomach, intestines uterus, heart, Kidney in
these appears to be the seat of the most
painful nervous Inflammation.) The symptoms
by which we may be assisted in our diagnosis
in diseases of this Character (are the following)

it, we have a patient, say most frequently a female, of nervous temperament and probably subject to irregularities in the uterine or gastro-intestinal functions — is suddenly seized with a severe local pain having exhibited none of the premonitory symptoms (languor, lassitude, chilliness, loss of spirits & appetite) which always precedes acute & dangerous inflammation, the pain as I have stated which forms the most prominent symptom throughout is equal as much if not more complained of from the first outset as any future period of disease. This however is my opinion from what I have seen and read, for instance the left hypochondrium is the seat of the first attack often, but in this as in all other particulars there is much variety. I do not wish to convey the idea that irritation & inflammation are the same for surgical works furnish striking examples of local irritation distinct from inflammation. For instance irritable

heart, and testicle) and some cases of nervous headache (Ophthalalgia) In Inflammation there are forms which perhaps it is proper to mention, (1st) such as healthy & unhealthy the former according to the language of Surgery being such as ensues in healthy constitutions, when a part of the organization is impaired, being restorative in its tendencies and injurious only if excessive or misplaced whereas the unhealthy is essentially destructive and has little or no tendency to recover, (2d) Common & specific. 3d Acute & Chronic. I know not whether it is requisite to explain all the forms of Inflammation, seperately as you are perfectly acquainted with the subject, for I am sensible that not an individual Idea do I possess relative to the subject which is at all instructive nor likely placed matter before you to comment upon, so therefore I will pass on to speak of the Progress effects and terminations of Inflammation,

Inflammation is a progressive action, and when fully established pursues a course which is for the most part, continuous giving rise to certain new products, and ultimately to alterations in the organization of the parts affected — although there are many instances in which the inflammation after running a short course, will be found to end in resolution, viz. in recovery without any permanent injury & having accomplished either to the structure or functions of the part which was the seat of disease. But inflammation is not always a continuous & steadily progressive process: for it may suddenly leave one part of the body & attack another, an occurrence termed metastasis, or the inflammation without entirely leaving the part which was first attacked, may only undergo a mitigation while other parts become affected — and such is the course frequently pursued by inflammations of the skin, fibrous, serous and muscular tissues, viz. gouty, rheumatic, and

erysipelatous inflammation, it may assume the intermittent form, by suddenly abating and suddenly returning at more or less regular periods:- of this kind some cases of Ophthalmia Inflammation may subside spontaneously or be subdued by the timely application of remedies before any important consequences have resulted - any probably, beyond a moderate effusion of serum or lymph which will generally soon be absorbed leaving the functions & structures of the part unimpaired and in which case the inflammation is said to be resolved or to have ended in Resolution. But death is sometimes produced within a very few hours after the invasion of the disease, and previously to any important change having been effected in the properties of the blood & the secretions of the part the occurrence of death at so early a period, is chiefly observed when the brain or peritoneum (particularly stomach & intestines, are extensively affected and when young ~~[illegible]~~ children are

labouring under acute inflammation. In the latter instance death is chiefly owing to the rapid exhaustion of the vital powers consequent on intense febrile reaction and in the former to the sudden depression of the heart's action. The next effect of a progressive inflammation consists in a separation of the fibrin of the blood mixed with serosity, (albumen & water for instance) forming a soft concrete substance usually known as coagulable lymph, the effusion of which marks the adhesive stage of (inf.) the disease by this time having reached its highest point. Suppuration, this may be the principal of inflammations. Softening or loss of cohesion is frequently the cause of acute inflammation. The different chemical and mechanical irritants are some of the remote causes likewise & I might numerate many others if so disposed, lastly inflammations are primary & secondary idiopathic & symptomatic an instance of each, and then we are done

Inflammation of the lungs, brain, or intestines which supervene in the course of common continued fever — measles — scarlatina, & small pox are either, secondary or symptomatic while, those which are produced by exposure to cold or which follow a wound or chemical irritant are primary or idiopathic.
Having given you all the knowledge I possess at the same time acknowledging its inferiority I proceed to the treatment as explained by various authors. (Treatment)
In forming rules for the treatment of Inft, as well as other diseases it is necessary to attend to the following circumstances in their mutual relations — 1st, to consider attentively to the general state of health and the degree of constitutional energy possessed by the individual patient and in regard to this our judgment must not be formed entirely from the feelings expressed by the patient, since languor lassitude and a sense of muscular debility are prominent

features of Complaint in the Commencement of all acute diseases where real debility does not exist, but where functions of the nervous system are in a state of temporary depression, we will ascertain whether the (inft) be sthenic or asthenic, whether the symptoms be of the nature of Synocha or Typhus. 2d Consider the intensity and duration of the local (inft) and bearing these circumstances in mind follow the principal Curative indications viz, to subdue the increased force of the heart and arteries — 2d to diminish the local Excitement and Congestions, and to alter the actions of the inflamed Capillaries, 3d to alleviate the local pain and the morbid sensibility of the nervous system generally — which when excessive is apt to occasion death, by producing a rapid Exhaustion of the heart's action. which frequently happens in delicate females, aged & debilitated persons. The means to be relied upon for the fulfilment of such indications, are, bloodletting, generally

local, abstinence from animal food and stimuli of every kind, quiescence of mind & body; the topical application of cold, hot fomentations, and pediluvia, counter irritation with blisters & tartrate of antimony - the internal use of same. Ant, mercury & opium, digitalis and Colchicum. Some of these remedies are more suitable for one stage than another & some are to be preferred according to structure or part affected, (Bleeding) Our object in bloodletting in inflammation is to reduce the heart's action & keep it in a state of depression for a certain space of time until local inflammatory actions have subsided. If we can succeed in this we will seldom fail to give check to the local action and gain time for other remedies which exercise their influence over the disease in a more gradual manner. Therefore bleed seldom freely & early this will prove more effectual than than a number of small bleedings at more distant periods, although I will admit there

are some acute inflammations in which a moderate bleeding will prove decidedly useful. Persons advanced in life, young children, cannot sustain large & repeated bloodletting & in them we should avoid complete syncope. I wish you to understand that I place great confidence in the lancet, especially in Inf^ty. There are cases in which leeching, cupping, followed by blisters must form the chief if not the only system of depletion, general bleeding is most efficacious then ist, in acute Inflam^ty when situated in parenchyma of organs & in serous membranes, 2^d venesection is most beneficial when employed early and carried to such an extent as to make a depression on the general circulation, next, (Cathartics) this class is next to bloodletting in efficiency in the cure of more acute forms of Inflammation, their therapeutic action is twofold as, they cause a copious discharge of the watery portion of the blood and tend to deplete the vascular systems, purgatives are more applicable to inflammation of the brain or its membranes than elsewhere. I dont wish to infer they have no salutary effect in any other state

for they are employed with advantage in pulmonary inflammations, but are inadmissible after free expectoration has commenced, used also in Hepatitis, Mercury) This is a remedy used beneficially in certain cases of inflammation, such as Pericarditis, iritis, croup, & violent dysenteric & hepatic inflts, in these diseases it should follow the lancet the free action of mercury is to be carefully shunned unless in cases of greatest urgency, in scrofulous constitutions &c, this remedy can be given in small & alterative doses with considerable advantage such as pil, Hydrarg, & the Hydr. cum creta ought to be preferred and in cases where you have irritation of mucous coat intestines or stomach combine it with compound powder of ipecac & Opium, is inadmissible in all acute inflammatory previously to the force of the circulation be subdued by bleeding & the bowels freely opened by a cathartic after this however a full dose of liquor opii sedatives or solution of muriate morphia may be admin.d with much advantage before reaction has taken place Opium is seldom safe in cerebral inflammations

the Constipating effects of the remedy must be guarded against in every Case. (Antimony Tartrate of Antimony, this is the only Compound of ant, that can be relied upon as an antiphlogistic agent & is used with advantage in acute grades of inft, more particularly in pulmonary parenchyma which is given in doses of one to two grains every hour or two to the extent of a scruple or half a dram in twenty four hours, (Digitalis & Colchicum) these are seldom used. Counter irritation, so long as the skin continues hot & dry and the pulse full and hard blistering is Contraindicated and it is only when the violence of the fever & other symptoms have declined — some degree of local inflammation still however remaining that Counter irritation is useful, Blisters are more efficacious in inflammation of serous membranes, Cold and hot applications Evaporating lotions or iced water, is often beneficial in superficial inflammations ~~as~~ also of the brain or its membranes. hot fomentations better adapted to abdominal and deep seated inflammation,

Cold acts by virtue of the direct sedative influence which it exerts on the inflamed Capillaries, to produce this effect you must keep the Cold applied to the part for a considerable time, Heat acts beneficially by soliciting an increased quantity of blood to the surface where the heat is applied, it will also favour the effusion of serum relieve the Capillaries from their state of distention. The treatment of Chronic inflammation is upon the same principle, repeated bleedings, Counterirritation friction steady adherence to a mild tonic regimen, a course of gentle laxatives Combined with alteratives, and such of the tonics as are least stimulating. And lastly) by an avoidance of every kind of excess, and every source of irritation mental & Corporeal the same principles of treatment are applicable with slight modifications to all the subdued forms of the disease — such as the scrofulous inflammation; and also to those Congestive affections which pursue a Chronic Course.

S. S C.

Inaugural Dissertation
on
Pneumonia,
Submitted to the Examiners
of the
Medical Faculty
of the
University of Glasgow
for the Degree of Doctor of Medicine
by
[illegible]
[illegible]

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An Inaugural Dissertation on Pneumonia

Submitted to the examinations of the Provost, Regents & Faculty of Physic of the University of Maryland for the Degree of Doctor of Medicine

by

Bernard A. Daugherty

Baltimore February 5th 1847

To

William Power, M.D.

This is inscribed as a testimonial of respect for his private worth and professional character. And as an acknowledgement for many kind favours received by the

Author

Gentlemen.

As it is required by you, that each applicant for the degree of Doctor of Medicine should present you with a Thesis of his own composition, on some medical subject. I have therefore chosen Pneumonia as the subject of mine, and hope you will make full allowances for the many imperfections which may be found in it.

Pneumonia, or inflammation of the substance of the lungs. In this variety of disease, there is dull pain in the chest, principally in the neighborhood of the Sternum, sometimes in the side, Epigastrium, and scapular region. Breathing very much oppressed, more especially when the patient is in horizontal posture. There is some cough, attending this disease, which is dry in the commencement, but soon becomes accompanied by a copious viscid expectoration, of a rusty colour, being like mucous mixed with blood. The urine is high coloured

and scanty. The countenance becomes changed if the disease be much advanced. The patient wears an anxious look, and his face is livid or pale. Breathing is very difficult and oppressed, particularly (as I have before stated) when the patient is in the horizontal posture which position is insupportable, and the patient is obliged to have his shoulders raised or propped in such a manner as to be kept in almost the sitting posture. He pays no attention to anything that may be passing around him: but appears wholly engaged with his breathing, which is short and hurried. His nostrils are fully distended and in action; and it would appear from his movements, that the air did not penetrate beyond the primary bronchi. The dyspnoea varies with the situation of the inflammation: if the inflammation be situated in the upper lobes, it is much greater, than if it be situated in the lower lobes. Respiration is so laboured as to prevent the patient from talking much, he cannot

say more than three or four words, without being obliged to pause to take breath. There are rigors or chills followed by heat, in the commencement of the disease, indicative of inflammation. The pulse is full, frequent, obstructed and labouring; but seldom hard. As the disease advances, it becomes softer, weaker, irregular and still remains obstructed.

The cough, which is dry in the commencement, (as I have before stated,) as the disease advances becomes accompanied by a profuse rusty coloured sputa which are so characteristic of this disease, as not to be mistaken for that of any other complaint. The sputa form in vessel one tumbling mass, so viscid, as to allow of inverting and shaking the vessel, without being able to detach them from its sides and bottom. When we find these sputa present, we may be pretty certain we have a pneumonia to deal with. These sputa may possibly be absent. Still this is a matter of rare occurrence. The mucous and

blood, of which the sputa are composed, are so intimately mixed, as not to present streaks as in Bronchitis, nor is it pure as in Hæmaptysis. I cannot view the sputa as truly Characteristic of pneumonia, since it is the only disease in which they are exclusively met with. In proportion to the quantity of blood contained the sputa are they changed in colour from that of a yellow to rusty colour, or decided red.

When the sputa cannot be easily shaken from the sides of the vessel, we have great reason to fear that the disease has passed into the second stage: but should they flow readily from the vessel, we have every reason to know that the disease has not yet passed the first stage.

The various colours of the sputa may be frequently be seen in the same vessel, which, no doubt, is owing to the quantity of blood combined with the matter, which is expectorated at different times and from

the different inflammed parts. The grey shade which is also seen in the sputa, according to Laennec depends upon the same cause. It constitutes the bilious sputa of Stoll and his disciples. Laennec says he has met with bilious ~~exxpolixxxxx~~ looking expectoration, when bilious complications did not exist, and again, he has seen this colour disappear from the Expectoration after the bilious evacuations. We find the sputa filled with air bubbles of different sizes, sometimes quite large. ~~the~~ which cannot escape owing to the tenacity of the fluid. As I have before stated, the Expectoration acquires a great degree of tenacity when this is the state of the case, and the chest gives a dull sound upon percussion, at the same time we hear bronchial breathing. Then we have the disease at its height, and the sputa remains the same for some time. Should the inflammation recede, the sputa lose their characteristic appearance

also their tenacity, and become like that of Catarrh. But on the other hand, should the disease go on increasing in violence, this acrity colored sputa continues untill the end of the disease. The Expectoration may decrease in quantity; but it does not in tenacity, and the sinking patient is not able to expectorate this fluid which collects in the bronchi and trachea, these passages become filled or obstructed, and the patient dies of suffocation. Andral compares the sputa which exists in advanced stages of pneumonia, to liquorice water, or plumb juice, and goes on to state, that the occurrence of this kind of expectoration, led him to conclude that the third stage of the disease had supervened. The different colours of pneumonic sputa, can be represented by taking a solution of Gum Acacia, and then adding to it blood drop by drop, the different colours are formed one after the other: first the yellow tinge, next tawny, or slightly

then the rusty Colour, and finally the intense red. The sputa may be tinged, though not often, with bile; still bile is not looked upon as the cause of yellowness in pneumonia.

Delirium oftentimes occurs in this disease and is considered an unfavorable symptom which depends upon the blood not being duly arterialized. Gangrene is occasional by the result of acute inflammation of the lungs; but not often. Watson in speaking of gangrene and abscess of the lungs, as a consequence of pneumonia, says gangrene "is more common (though under any shape rare) as an independent and primary affection". Gangrene may be uncircumscribed occupying a large portion of the lung: again it may be more limited, being confined to a very small space. The gangrenous part is of a dark or dirty olive colour, sometimes a grumish brown, it is always moist or wet, resembling somewhat engorged lung; and emits a very offensive

odour, which is easily perceived during fits of coughing. This abominable odour, during life, is the most indicative symptom of the disease. It renders the room in which the unhappy patient is lying, almost insupportable. And the matter expectorated is of a dirty Chocolate colour. The duration of pneumonia is averaged at ten days. Occassionally it runs its course in twenty-four hours. Laennec says, "I think we may fix the duration of pneumonia as follows; the obstruction or first stage usually last twelve hours to three days before passing to the state of complete hepatization, this last from one to three days before spots of purulent infiltration make their appearance; and the period of suppuration (from the time when the concrete purulent infiltration is distinctly perceptable, until this is completely softened to a viscid fluid) varies from two to six days.

Blood letting, derivatives and resolvents, or stimulants of the absorbent system, obviously retard the progress of the disease and consequently prolong the period of the first two stages. Convalescence is rapid in proportion as the inflammation is of small extent and has been early checked".

It will now be well to give an account of the anatomical lesions. The view which Dr. Williams takes of this deserves attention. He says "It has always appeared to me, that the more the student in auscultation holds in view the pathalogical state on which the signs depend, rather than those signs themselves, and habitually reflect on their physical mechanism, as far as it is known, without empirically dwelling on the names, or bare description of sound, the more surely will he estimate the value of this method of diagnosis, and the more instruction will he receive from it. He will thus see that the central peripneumony may be so situated as

to yield sometimes no physical symptom, and at others, these to be discovered only by a careful examination; and hence he will see the impropriety of a partial method of diagnosis, and the great importance of attending to the sputa and other indications. When the inflammation is extensive, all these difficulties vanish, and the more intense and puerile respiration in the sound portions of the lung, depending upon the more rapid and forcible passage of the air in them further shows the infringement that has been made in the proper functions of the organ".

This opinion of Dr Williams's is worth more, than I could say, in favour of Pathological knowledge and Auscultatory signs, as while, now I to write for the next six months. Pneumonia Exhibits three stages or degrees clearly marked, very easily recognised, and distinguished by the terms Engorgement or Congestion: hepatization and gray hepatization or purulent infiltration.

The first of these degrees (Engorgement) is known by the lung being of a darkred, or livid colour, heavier, more solid, and less crepitous than natural. When the substance of the lung is cut into, we find it filled with a frothy fluid resembling bloody serum. And when pressure is made between the fingers this fluid flow from it abundantly. The organ is also found to be Eodematous, as it retains the impressions made by the fingers The texture of the organ can be readily distinguished, Except in some places where it has become more solid showing the commencement of the second stage of the disease. By taking an engorged lung and squeezing out of it this frothy matter then reinflating it, we have it resuming its natural appearance, which is a pale rose colour. In making post mortem examinations, care should be taken to avoid mistaking a mechanical engorgement which takes place a short time before death, or

"in articulo mortis", for the engorgement of pneumonia. There is generally an engorged condition of the most dependent portion of the lungs of persons, dead of diseases of a typhoid character. To prevent this mistake, we must take into consideration the dependent position of the part and the previous symptoms. But to return to the subject. Should the inflammation continue to increase, the disease passes into the second stage, or that of hepatization. In this variety of the disease, the lung becomes impermeable to air, and is therefore devoid of crepitation. it has increased in weight, and when placed in a vessel of water sinks immediately. It (that is the lung) bears a close resemblance to the liver, hence the origine of the term hepatization. And when cut into in this stage of the disease, the surface cut presents a dark red appearance, interspersed with black spots, caused by a black pulmon-

any matter, and the interlobular tissue. This tissue which in the healthy condition of the organ cannot easily be seen, now becomes quite distinct. The lung now wears a varegated appearance somewhat resembling marble. I should have stated that when the cut surface is scraped, a small quantity of bloody serum is collected, which is now consistent, than that hitherto spoken of, mixed with fluid of a purulent character. This change renders the lung more friable than before, and more easily broken between the fingers. The volume of a hepatized lung, is greater than that of a normal one, and when the chest is laid open it does not collapse. It appears swollen, which is caused by the congested condition of its vessels and an extravasation of bloody serum or purulent matter into the air cells. Should the disease still increase in violence, we have it passing into the third stage or gray hepa

tization. This condition of the lung, takes its name from the colour of the organ, which has changed from red to gray. In fact it wears several appearances: some places are of a yellowish colour, other parts reddish-yellow; again in some places a grayish hue mixed with yellow: withal it's general appearance is gray. In this condition the organ is quite rotten and friable; being filled with a purulent fluid, which flows out freely, when the substance of the lung is cut through with a knife. If a portion of the lung is pressed betwen the thumb and finger, it becomes reduced to a pulp, closely resembling this purulent matter, with which it is filled, only a little more consistent. The finger can be forced into it with ease, leaving a cavity, something of the form and appearance of an abscess, and which might easily be mistaken for one. The suppuration is pretty generally diffused throughout the texture of the organ

and what is very strange, this suppurative inflammation very seldom gives rise to circumscribed abscesses, as we often see taking place in the cellular tissue of other organs, or parts of the body.
Laennec says, that in ~~xxxxx~~ several hundred post mortem examinations which he made of persons dead of pneumonia, in only five or six instances did he find collections of pus, as in abscess, and one case only of true abscess. And he met with only one case of true abscess of the lung. Collections of pus occur in the pulmonary tissue or substance in connection with inflammation of the veins. Cases in which hepatized lung is found surrounding collections of pus, as a consequence of uncomplicated pneumonia, are of rare occurrence. Tubercular Cavities and vomicæ should not be mistaken for genuine abscesses. These arise from different causes, as do deposits from phlebetic infla

mmation. Malson accounts for this singular phenomenon in the following manner. "When speaking of inflammation in general I point ed out to you the remarkable influence which ~~atmospheric~~ the presence of atmos phric air in contact with the inflamm ed part, has in accelarating or determini ng the event of suppuration. In a recent cut, the admission or exclusion of the air to the cut surface will make all the di fference between the adhesive and the suppurative inflammation, and so in the other cases which I then mentioned, and will not now trouble you by repeating. Now it seems to me that the same princi ple obtains in inflammation of the lungs. First there is an Effusion of serum and blood, then of lymph and blood, and so no wall of circumvallation is formed by the coagulable lymph as is the case in cellular tissue which is not accessible by the air".

"We may have single, or double pneumonia; or lobular pneumonia. Again we may have it still more circumscribe, attacking only part of one lobe. Pneumonia is more common on the right side than on the left. Laennec says "The lower parts of the lungs are those most commonly occupied by pneumonia; and when the disease involves the whole viscus, it is almost always the inferior parts in which it commences. "When the three degrees of inflammation exist in different parts of the same lung at the same time, the site of the more advanced stage is usually in the inferior portion. It is much more uncommon to find the inflammation confined to the upper lobe. It is not so unusual, however to find a part of the centre of the lung inflammed, while the superficial portion is in a sound state. "We never find the whole of both lungs inflammed in the third or even the second degree; and this for obvious reasons, since

an obstruction of this kind could not take place instantaneously, and did it happen, would under respiration quite impossible. But it is by no means uncommon to meet with cases in which one whole lung, and more than half the other, is quite impervious to air. On the other hand we find death taking place before the obstruction has reached the fourth part of the organs of respiration. Andral says that in one hundred and fifty-one cases of pneumonia which happened in his hands: ninety occured in the right side alone: thirty eight in the left alone: seventeen of in both sides at once, and six the situation was uncertain. There is a bronchitis always accompanying pneumonia. The mucous membrane of the large and small bronchi present a red appearance, and when one lung alone, or part of a lung is inflammed, the bronchial tubes leading to that part alone is red

or inflammed. A bronchitis may exist without a corresponding pneumonia; but a pneumonia seldom, if ever is seen without a corresponding bronchitis. In inflammation of the lungs, there is generally met with an accompaning inflammation of the pleura. This has induced some writers to apply to it, the compound term pleuro-pneumonia. Still we may and do have pneumonia occuring without any accompaning pleuritis. As I have given as clear a discription as it is possible, for me to do, within the short time allowed me, of the different ~~characters~~ changes which the lungs undergo during and attack of pneumonia, I will now go on to speak of the physical or auscultatory signs, which each of these different stages disclose. When the ear is applied to the chest during the stage of engorgement, we hear what is called crepitous ronchus, a noise resembling the rumpling of very fine parchment, or the rubbing of a

lock of hair between the fingers, close to the ear, or the breaking of a sponge cake near the ear, or the crackling of salt when thrown upon red-hot coals. It is the finest and smallest crepitation, which is heard in diseased parts of the lungs. This sound may be heard over a very small space in the commencement of the disease; and is a very important symptom, as it tell us immediately what we have to deal with, we know at once the part giving forth the sound is in the stage of engorgement: being filled with a frothy fluid resembling bloody serum, heretofore spoken of; and the sound is caused by the air passing in and out through this fluid, forming bubbles, and they bursting in quick succession. In the earliest stages of the disease, this sound is heard mingled with the natural vescular murmur, Dr Williams in speaking of the cause of crepitous rone hus says. The distended vessels and the

the serious effusion in the interstices, pass on the minutest bronchial ramification, and partially obstruct the ingress of air into the cells to which they lead, while the viscid secretion of the mucous membrane, simultaneously inflammed, filling the calibre of the tubes thus narrowed, only yielding to the air in respiration, facing its way through it in succession bubbles. This bubbling passage of air through a viscid liquid contained in an infinity of tubes, of equally diminished calibre, causes that regular and equally crepitation which constitutes the true ronchus crepitans. By this it appears that the sound originates in the air cells and minute bronchial ramifications. The minute crepitant ronchus will continue to advance, untill it supercedes the vesicular murmur, which assures us that the disease is fast approaching the second stage. But should the vesicular murmur predominate over the crepitant ronchus

we may not assume, the disease has not passed the first stage. While the inflammation remains confined to a small space percussion gives no valuable information. This is often the case when the inflammation is quite extensive, that is, if it (the engagement) be confined to the lower part of the right lung, on account of the presence of the liver in that region. The crepitant ronchus does not remain long stationary, it either resolves itself, or goes on increasing, and the crepitation is heard over a larger space, and the whole lung, or perhaps the, is involved in the disease. After which this sound gradually decreases, and we hear, neither vesicular murmur or crepitant ronchus. When these sounds have passed away, we hear what has been called bronchial respiration, ~~which usually takes place when the tubes are in place of the lungs~~, which assures us that the second stage has supervened.

In the healthy condition of the lungs we do not hear the air passing through the bronchi, because the sound is obscured by the vesicular murmur. In hepatization of the lung, it has become a good conductor of sound, and we hear the air passing through the bronchial tubes, producing this sound, bronchial respiration. This sound is heard most distinctly at the end of a cough. In this stage of the disease, air does not enter the air cells. This being this state of affairs, the voice is heard quite distinctly when he speaks, it is heard as though he (the patient) were speaking through a tube. If we apply our ear to the chest of a person in health, we can hear the the persons voice, but not with the same distinctness, as when the lung is hepatized. This bronchial voice has received the of bronchophony. This same sound is heard in Phthisis pulmonalis. Percussion gives a dull sound in hepatization of the

lung, when the disease is not central, and extent to the surface of the organ. Bronchophony is heard more distinctly, when the inflammation extent from the ~~surf~~ centre to the surface. Should a portion of healthy lung intervene between the disease part and the external surface bronchophony is not distinct, or perhaps not heard at all. And if the whole lung be hepatized so as to prevent the organ being expanded by air, we hear no bronchial respiration, caused by the air being stagnant in the larger bronchi. Bronchophony is still heard. If in one lung this degree of inflammation is general, in the opposite is heard what is called puerile respiration; or should only part of one lung be hepatized, in the remaining portion will be heard this sound, showing that part of the respiratory apparatus is out of order, or in fact completely spoiled, and the healthy

pations are trying to make up the deficiency. Now that we have arrived at a condition of the lungs, in which we hear no air entering them, and no sound but bronchial respiration, it may be looked upon considerable anxiety, we are not able to say with any certainty whether the lung will return to their normal condition, or pass into third stage. But we will suppose resolution about to take place. In this case we would hear slight crepitant ronchus, taking the place of the bronchial respiration, particularly at the termination of each inspiration. By degrees the crepitous ronchus would increase untill it entirely supercedes the bronchial respiration. There is also a corresponding decrease in the bronchial voice, owing to the lung becoming impermeable to air, and therefore becoming a bad conductor of sound. The bronchial voice and respiration having been entirely superceded by the ronchus crepitans, we

them fluid the vesicular murmur mixing with it, (the ronchus crepitans) and very gradually taking its place until we have the lung restored to its healthy condition. Now let us consider the worst that can befall an hepatization of the lung: but, can we by physical signs trace the disease any further, this appears to be very doubtful, and judging from what Dr. Watson says on the subject, we cannot with any degree of certainty, he says. Auscultation has traced the disease through its stage of ~~hepatiz~~ ~~&~~ ~~xxx~~ engorgement, and into its stage of hepatization. Can it trace it further? I believe not with any certainty. We cannot say whether the lung remains in the state of hepatization, (as it may remain) or whether it has passed into the third stage. But at last, if the structure of the lung breaks down, and a portion of it is exscutiated, air finds its way into the vacant spot, and gives rise to a large gur

gling crepitation. But the other signs sometimes come to our aid when this state has been reached. We often find after death, the three degrees of pneumonia existing in different parts of the same lung; and therefore it is not to be wondered at that the different parts of the chest during life should yield sounds indicative of each of those degrees, or at least of the two first: minute crepitation here: bronchial breathing and bronchophony and dulness on percussion there, and in another spot no sound at all, or on the other hand puerile respiration." Laennec in speaking of this stage of pneumonia says "The infiltration of pus within the pulmonary tissue furnishes no new signs so long as the pus remains concrete. When this begins to soften we perceive in the bronchi a more or less distinct rattle, occasioned, either by the introduction of the pus into them, or by a new copious

cular tissue, which then takes place. An abscess is sometimes the consequence of inflammation of the lungs. I will give the signs by which it may be distinguished from the other conditions of the organ. In abscess of the lung, we have the pus collected in one spot in consequence of it not being expectorated or not absorbed as it becomes soft. By placing the ear over the seat of abscess, we can easily distinguish a mucous or cavernous ronchus, and instead of bronchophony we hear pectoriloquy, also cavernous respiration, instead of bronchial. Should the abscess be situated near the surface, we hear during respiration and coughing, what Laennec calls "puffing respiration", or as circumstance may have it, the "nailed puff". Should the abscess, be not altogether full, this coarse mucous ronchus is so very distinct, as not easily to be mistaken. The pectoriloquy is an additional evidence of the existence of

abscess. A little experience in the use of Physical signs, will enable almost any one to distinguish between the signs of abscess, and those of any other condition of the lungs. Prognosis. The first degree is not so much to be dreaded as the second, and the second not so much as the third. A patient may recover from a pneumonia in the first degree also from the second, but after the disease has passed into the third stage, it is doubtful whether or not it is possible for resolution to take place. Even in the first and second stages a great deal depends upon the extent of the inflammation. A pneumonia of considerable extent in the stage of engorgement is looked upon as being of as serious a nature, as a much more circumscribed one in the stage of hepatization. When the upper lobes are inflamed, it is viewed in a more serious light, than when the same amount of in

flammation exists in the lower lobes. Also when the dyspnoea is great it is a very bad sign, and if along with this difficulty of breathing goes a feeble pulse, we have still cause for fear. When the pulse does not rise after bleeding, and delirium comes on we are obliged to give an unfavorable prognosis. Sputa of very viscid nature and rusty colour denote a high degree of inflammation, and the plum juice sputa, should lead us to suspect the third stage, and then we again give an unfavorable prognosis. The next in this description to be spoken of is the several causes of pneumonia. The long continued application of cold and dampness to the body, particularly when in perspiration, and oftentimes when only moderately heated. Laennec remarks on this subject, that the "Russian who rolls himself in the snow after coming out of the hot bath, or the baker who goes from the heated oven

almost naked into an atmosphere of a temperature below zero, is not liable to attacks of this disease; while the porters, whose occupation oblige them to stand for a length of time at the corners of streets, are frequently affected by it." From this we would infer that the application of cold succeeding excessive heat, if not continued for a length of time, is not so liable to produce the disease, as when the cold is applied to the body when only moderately heated; but continued for a considerable length of time. This disease is more common in young persons of full sanguinous temperiment and strong habits of body. In old persons the disease is more often fatal, as is also the case in children. The disease occurs most frequently between the months of February and May. Pneumonia often arises from no known causes and it occasionally occurs in Epidemics.

treatment. The great remedies in the treatment of pneumonia are: Blood-letting, tartarized antimony, Mercury and derivatives. Blood-letting, by many writers, is looked upon as the principal remedy; at this regard tartarized antimony as the remedy, alone, to be relied on; again some will tell you that Mercury, as alone remedy, is the sovereign one.

Blood letting in pneumonia is indispensable, the extent to which we are to carry it, is regulated by the period of disease, the pulse, and degree of pain in the chest, also the dyspnoea should be looked to. It reduces the inflammation, and relieves the lungs in their particular function, thereby relieving ~~the~~ or diminishing the dyspnoea which almost invariably exists. The greater the quantity of blood sent to the lungs, in excess, the greater the dyspnoea; by extracting from the volume of blood in the general circulation, at the same time, that we relieve this distressing

symptom; we relieve or quiet any delirium that may be present, by reducing the circulation of venous blood in the arteries, it also prevents the effusion of lymph and the destruction of the cellular texture of the organ. When we bleed in this disease we relieve the lungs, of the duty of arterializing more blood than they are able; One or two decided bleedings are always better than several small ones, and in bleeding we should allow the blood to flow from a large orifice, in order that we may see its character. Andral recommends drawing at the first bleeding from sixteen to twenty ounces, this in my opinion will depend upon the strength of the patient and the period of the disease; but he (Andral) goes farther, and advices the repetition of this operation two, or three times in the twenty-four hours. In opposition to the course pursued by Andral Louis has endeavoured to show that venesa

ction has little or no control over the progress of pneumonia. Chomel says, "from twelve to sixteen ounces, should be abstracted three times per day." Dr. Gregory in speaking of bleeding in this disease says - "the danger of a large bleeding is less than the danger of the disease. Blood should be abstracted early in the disease, before the texture of the lungs is injured; the patient should be in the upright posture, and the blood be allowed to flow in till syncope appears, the pulse becomes softer or if it be contracted untill it becomes fuller, or the dyspnoea relieved. The pain may not cease immediately; but it will after a few hours have elapsed. Should the breathing be not relieved after the first or second bleeding, the case generally does badly. The bleeding should be practised at short intervals. The patient will do better, and loose less of his strength. By prompt treatment of this kind, we take the disease, as if it were by sur-

pride, and arrest its progress at once. The application of cups or leeches over the seat of pain or diseased portion of the lungs, is of great assistance to the general blood letting. Besides the local abstraction of blood cups do good by their derivative effect.

Blood letting is useful in the second stage of the disease, as well as in the first, we remove it now more cautiously, because by abstracting to largely we weaken the patient, without gaining our object: which is the absorption of lymph, the reduction of the force of the heart and arteries, and the prevention of the extention of the inflammation, also the relief of the dyspnœa. There is a time when blood letting is injurious or when it is contra-indicated, i.e. at this time the abstraction of blood reduces the patient's strength and disenables him to rid his lungs and bronchi of the tenacious fluid which is secreted by the membrane, which lines the latter

Expectoration is often stayed during this stage of the disease by venesection.

When blood letting can be no longer practised, or when it may be necessary to assist it, we have tartar-emetic and Mercury, to answer these purposes. The tartarized antimony can be best employed in first stage or that of engorgement, and Mercury in the second stage and that of hepatization. In the administration of the antimony we do not expect to produce vomiting: but to produce its sedative or contra-stimulant operation. It may when first given occasion vomiting and purging, in the greater number of cases after the first few doses, the stomach comes to tolerate the medicine. It is very strange that in this disease the stomach will tolerate this agent, but much depends upon the extent and severity of the inflammation. Should the stomach refuse to tolerate the medicine, this can be corrected by the addition of a few drops of laudanum to

each dose. A good mode of administering antimony is, to commence by giving a third of a grain every half hour in conjunction with a few drops of laudanum, when we find the stomach will bear this, we may omit the preparation of opium, and continue the tart Ant, by degrees increasing the dose untill we give two grains per hour. The case does best when the medicine is best borne. When we find the medicine has relieved the dyspnoea and other urgent symptoms, the medicine may be intermitted. I should have remarked that we give Antimony after free blood letting has been practised, or not just as the circumstances of the case may have required. Should inflammation have continued to increase or reached the second stage Mercury is deserving of more confidence than the Antimony. The Mercury should be administered in small dose, say one or two grains, in short intervals untill the

gums are affected, to prevent it running off by the bowels, we may combine with it some of the preparations of opium.
If Calomel is not well borne by the stomach, which may be irritable, we may administer blue Mass or Hydrar Cum Creta.
Again if this will not do, we may use the Mercury Endermically. By treatment of this we prevent the effusion of lymph, and when it is effused promote its absorption.
If under this treatment, modified to suit each case, we find the patient pulse sunken, pallid and extremities cold, Also delirious and pulse feeble and irregular, we know the powers of life are fast sinking it will be then necessary to support him by administering Carb, Ammon, Quinine Sine Ka, and nourishing diet. When the fever has abated and the skin is no longer burning; but we find the expectoration difficult, considerable dyspnoea, pain & tightness of pressure in the chest. A large blister applied

to the part is productive of most salutary effects. This must not be applied untill the fever has abated otherwise it only tends to aggravate the inflammation. Purgatives are not of much use in this disease, as they interfere with action of the Antimony and more particularly with the Mercury. In conclusion I will but remark this is only a general history of the disease, no doubt very imperfect, still the time and space allowed in which to write, would not enable me to offer anything better.

Therefore I hope the faculty will deal leniently with me.

E.4 —

An Inaugural Thesis
On Cold
Respectfully submitted
To
The Provost Trustees and Medical Faculty
of the
University of Maryland
By
Richard C Markall
of Virginia

March 1847.

Cold as a Hygienic and Therapeutical Agent.

Old things are passing away. Time ceases not his restless tread Onward. Still passing onward he knows no rest. Night comes and the earth is quiet. under its shadow all things living find repose. To the animal and vegetable a day and a night are given, and everything that hath the gift of vitality is acquainted with sleep. Not so Time: for he hath a circle for his path and on that path there is no resting place. No sabbath marks his circle. Time knew no Sabbath ere his course began. One man he will know when Eternity his circle has removed. Then his weary foot may rest. not until then.

This is nothing new. Time takes in one hand "old things" and conveys them from our sight. with the other he uncovers the hitherto unseen, those things which were but we knew it not. which had an existence but whose life vanished from us. Almost as restless as Time is the mind of man. But little sleep comes to it. One generation of men act. and think, another coming after annuls those acts and consigns those thoughts to the graves of the "untime". One people comes upon the world's stage and form a nation: they build cities, enact laws establish religions and to them the rest of the world are barbarians. But ere long. their cities are in the dust their statutes are buried beneath them their altars are

trodden under foot, and their bones enrich the soil of which the barbarians are now Lords. The latter pass away also for time knows no rest. The miner turns up with his spade implements of labor of which he knows neither the name or the use: yet the hand by which they were wielded may have dug with them in the same spot over which he now treads. For the same gold which incites him to labor. The husbandman of today knows not the plough share of yesterday, nor the dresser of vines the pruning hook of his father. Old things are passing away. Reason science and art, the servants of time are removing them. The fact of yesterday is the falsehood of today, and the fact of today has overthrown the theory of yesterday. Such is the certainty of mortal things and human knowledge.

The history of all sciences teaches us this great truth: the history of the science of medicine teaches it on every page. Noble as is this science, it has hitherto been far from perfect. It is not now exact. And why is this thing so? Because is human originating with mortals, and therefore cannot be perfect. Nevertheless we may rejoice in the greatness of medical science and congratulate the world that though not perfect its march is onward. that it daily

approximates the point where it may be marked exact. And herein do we find consolation: yea more, herein rests our professional life. for the humblest votary of the medicine be he diligent and be he honest, may hope to add one or more blocks to the Temple of his Deity.

Turning to the subject proposed for consideration in the following pages, suffer me to premise that although science and art are engaged in removing old things and bringing to light new, yet it cannot be expected that a mere candidate at the gates of this temple should prove himself one of their Agents. Enough for him to be able to say how their good work advances and to explain his understanding of that which he has gathered from the Priests before their Altars.

This I shall endeavor to do in a plain and concise manner. with assured that wisdom will correct whatever errors I may make and charity excuse whatever faults I may commit.

Next to ignorance customs and prejudices are em most potent in retarding the march of truth. but for these her advance would be rapid and easy. But tho they retard they cannot arrest her progress. Before her light

they must at last melt away: tho' they amount to a part even of a nations character they will vanish beneath her beams. A few years since the use of cold as a medical agent was either almost unknown, or known only to be neglected condemned and feared. Ignorance prejudice and habit, the fruitful sources of so many errors, may all be charged with this guilt and to them alone may this evil be ascribed denying even in this life, to suffering humanity, a drop of cold water to cool the burning tongue, and withholding the antidote whilst the poison was preying upon the vitals. Happily for humanity old things do pass away, and now the fever blanket is replaced with the cooling shower and the heating draught by the delicious ice crystal.

Glancing for an instant at cold as a Hygienic agent we will then turn to its more important virtues its medical properties.

The primary action of cold upon the living body is to depress the vital forces. This it does, by the shock it produces upon the nervous and vascular systems, and by the sudden abstraction of heat from the surface of the body. If the

application of cold be too long continued the powers of life gradually sink and the body sleeps in death: but when it is moderate the secondary action is Exaltation of action or excitement. Now it is this law which directs us to the employment of cold as an Agent to preserve health. A due degree of excitement tends to promote and is indeed necessary to maintain the healthy action of the various organs of the animal economy. If that economy had no tendency to take on diseased action, even the functions of its organs never liable to become disordered, then nature would have no occasion to call upon art for aid to preserve health. But so long as the body is the heir of disease, just so long should she and art be friends. In this truth nature has instructed even the brute creation and from them man may learn a lesson of wisdom not taught in every Hall of Learning. Their instinct is often a surer guide to the fountains of truth than the most profound reasonings of man. But we are wandering from our subject proper.

The reaction following the primary effects of cold is productive of good in two ways. First, by giving new life and vigor to the nervous system. And secondly

By increasing the activity of the vascular system.
The nervous filaments spread over the whole surface of the body, receive the shock and convey it to their centres. From these the excitement is transmitted to every tissue and fibre by means of the deep nerves and their minute ramifications. Every filament of the body receives a portion of this new life and by it is excited to greater action. And what is this action? It is life: or rather it is the manifestation of life. This "Greater Action" then is life more manifest.
So intimately connected with the nervous, is the vascular system, that the former can scarcely be affected without the latters sympathising with it. The reaction produced by cold is simultaneous in both. The blood which had retired from the smaller vessels to the heart and large vessels, returns quickly to the capillaries and flows thro' them more rapidly than usual. Now it is this blood which conveys to the sensual organs and tissues of the body, their food. The more abundantly therefore it is sent to them the greater will be their supply of nutriment and if they are able to consume it the faster will be their growth and increase. Now the excitement of which we have spoken

as extending to the most minute nervous ramifications, giving fresh vigor to the cells of secretion and absorption, enabling them to work faster and thus the one to select and appropriate the elements proper to its respective tissue and the other to take up and convey from that tissue those materials which have become effete.

But the action of cold water upon the living body does not stop here: it extends to the respiratory and digestive apparatus and exerts a salutary influence on their functions, or rather the performance of those functions. The lungs, under the influence of the nervous system, expand more freely, more than the usual quantity of air is taken into them and the circulation goes on more rapidly through them. Consequently a greater supply of oxigen enters the blood and a greater amount of carbon is discharged from it. Thus the supply of nutritive blood is increased. The stomach and intestines the organs of secretion partake of this new excitement, in consequence of which their secretions are more abundant and more healthy. Their absorbents also work faster and carry more material, the product of digestion, into the circulation. In a word, healthy action is promoted

in a greater or less degree in every organ of the living body. Even the mind receives a share of this good, for the machine through which it acts is invigorated and kept in order and thus enabled to obey the will with promptness and effect.
Lastly the outward man is purified: his flesh is kept free from stain and if he will now bestow the same amount of labor upon the cleansing of his heart, he will indeed be a Godlike Creature.

Cold as a Medical Agent.

In the treatment of diseases cold is sometimes employed for its primary sedative influence. Sometimes for its secondary excitant action.
The purposes for which it is commonly are.

First. To diminish preternatural heat in diseases attended by a morbidly exalted temperature.
Second. To moderate excessive arterial action
Third. To cause contraction of the blood Vessels and thereby to arrest hemorrhage: or enable us by reducing their volume to restore displaced parts. such as herniary protusions &c.
Fourth. As a tonic, by exciting indirectly reaction in a

part or in the whole system.

Fifth. To communicate a sudden shock to the nervous system for the purpose of relieving syncope or spasm.

The mediums through which cold is applied as a medical agent are. Air. Water & Ice.

Cold air may be applied in various diseases where the indication is to reduce the temperature of the body. but when the shock produced by cold water comes to great for the strength of the patient: or when its use is contra-indicated by peculiar tendencies of the disease, such as inflamation of internal organs.

Its action is upon the skin. upon the mucous membrane of the lungs, and through the nervous system upon the whole economy. A cool room in fevers is often a most salutary remedy and is certainly far more agreable to the feelings of the sick than hot air and hot blankets. It must however be used with caution when the thoracic organs are threatened with inflamation. and of course must be suspended when we wish to excite diaphoresis.

Cold water. a much more powerful agent than cold air. therapeutically. far more extensively. Applied externally or taken internally it is a remedy of many

virtues. It is here that we may truly congratulate our-
selves, in the fact that old things are passing away;
that the prejudices against the use of cold water in
fevers and its exhibition in conjunction with mercurial
remedies are following our grandmothers to their graves.
No intelligent physician now refuses his patient a drop
of cold water whilst he is tormented with an ardent fever.
On the contrary, he permits him to use it freely and fre-
quently prescribes it as one of his remedies.
In Remittent and intermittent fever, the external ap-
plication of cold during the hot stage when the skin
is dry will often be followed by a diminution of all
violent symptoms, abatement of fever or entire inter-
mission, relief of nausea &c. Taken internally it allays
irritability of the stomach and promotes diaphoresis.
We will not speak separately of the various modes in
which cold water is applied to the surface of the body.
They are all indifications of each other and their general
effects are the same. Baths, Affusions, Shower Baths
Cold Douche and Sponging, are all forms in which it
may be applied and they are to be chosen, according to
the disease, the peculiarities of the disease, and the

circumstances and situation of the patient.
The temperature of the cold bath varies from 33° to 60° F.
A knowledge of its action upon the living body must be our guide in its use and not the name of the disease.
Having spoken of its virtues in fever we will briefly refer to some other diseases in which it has been found useful.
In all inflammatory affections of the brain cold applications to the head are highly salutary driving the blood from the over distended vessels and preventing or releiving dangerous pressure on the brain. Thus in the convulsions of infants caused by too great an afflux of blood to this organ, a cold douche to the head while at the same time the lower extremities are immersed in hot water will often save the life of the little sufferer.
In insanity, the shower bath, by some writers is highly commended, its action being to allay mental excitement. According to Dr. Connolly's Report, its application the patient being up to his middle in warm water, seldom fails to subdue the paroxysms. The period during which it should be continued is a matter of some moment. When the patient appears overcome it must be suspended

and instantly renewed when symptoms of violence return. A strong shower continued even for a minute has sometimes considerable effect and it should never be many minutes prolonged without careful observation of the patient's state. After a few applications of this kind the patient becomes entirely subdued and should then be taken out of the bath, quickly dried and put into a warm bed. Calmness and sleep are the usual results and more permanent effects frequently follow.

The cold Douche has also been recommended in the treat:ment of maniacs. A column of water twelve feet high made to fall perpendicularly upon the head excites such a painful sensation that it's said the most furious maniacs who have tried it now, may be sometimes be cured by the mere threat of its application.

The moral propriety of this treatment however is extremely doubtful and I am inclined to the opinion that in any view of the question the difficulty of discriminating between those unfortunates who might be benefited by it and those upon whom its application would be the extreme of cruelty should ever forbid its use. The shower bath, though less powerful is certainly far more

humane.

Employed in the early stage of sprains the sedative action of the Cold Douche is powerful for good. Also in Chronic inflammatory and painful nervous affection of joints it proves useful as a means of exciting reaction. Cold effusions have been employed in Tetanus, but we think it rather a dangerous remedy and would be unwilling to make trial of its Virtues.

Hysteria and Epilepsy are often relieved by the sudden application of cold water to the head and face; the vio: lence and duration of the paroxysms are diminished and the comatose symptoms removed.

In many other diseases the application of cold to the surface of the body is productive of good; but we deem it unnecessary to dwell longer upon this portion of our subject. A review of the imperfect manner in which we have treated it, we will endeavour to trespass as little upon your time as possible in what we have yet to say.

Cold Enemata, used principally in cases of hemor: :rhage from the hemorrhoidal vessels of Enteritis affecting the lower portion of the alimentary canal and in mem:

:orrhagia

In each of these disorders it is an invaluable remedy.

Ice. like cold water is used both internally and externally and its effects are similar with certain modifications. Externally it is useful in inflammation of the brain and in cases of active hemorrhage from various organs. Internally it is used in the same cases in which cold drinks are indicated, than which it is a more powerful agent. In intermittent fevers we have found it deserving of the highest praise. Pounded fine and thus taken into the stomach, we have both seen and experienced its virtues in this disease. Doubtless it acts as a sedative and tonic. Frequently its action is more prompt and effectual than any other remedy we can exhibit, removing the distressing nervous symptoms and producing speedy and copious diaphoresis, followed by quiet sleep.

Ice water has been recently much lauded as a prophylactic of Remittent fever. As such it has been extensively used in the lower Counties on the Western Shore of this State, and it is stated that since its use has become general in these malarious districts the prevalence of malarious diseases has been

much less extensive, and the diseases much milder in form. Whether these statements are founded upon a sufficient amount of experience to justify their publication as facts, is yet a question for time to decide.

From the known properties of ice in cooling notwithstanding it to be strictly speaking a prophylactic of Malaria further than by giving tone and vigor to the system and thereby enabling it to resist the invasion of this subtle poison.

Finally. I cannot omit mention the use of Ice, and it is probably one of its most important uses in protracted parturition.

In the year 1835. Doct. Louis Martin of Prince Georges County Maryland having traced out as he conceived a new general law of the animal economy and applying it to practical purposes was led to the use of ice under the following circumstances:

He was called to a case of labor which had continued when he arrived twenty four hours. It had proceeded regularly at the commencement, that is there had been tolerable strong pains recurring at regular intervals: the parts were well dilated

the membranes ruptured and the waters discharged gradually the pains became weaker and weaker until they entirely ceased and the uterus seemed to have lost all disposition to contract. The patient had now become nervous and much excited and the pulse increased in frequency, although not indicating decidedly the use of the lancet.
At this moment Doct. Mackall ordered a bowl of pounded Ice and made the patient swallow a spoonful at a time in rapid succession. Immediately or as soon as the remedy had made an impression on the system, strong pains returned, the uterus contracted with great force and in a few minutes the child was safely delivered and the mother left in the most favorable condition.
Doct Mackall has witnessed the administration of this simple remedy in a large number of cases similar to that above described and invariably with the same happy result. He informs that it is very generally used by the physicians and midwives in his section of the State and that wherever the practice is known it is universally approved. Then "about

of pounded Ice" is the first thing thought of in labor and is considered one of the most indispensable articles of the Accoucheurs Materia Medica.
Leaving out of the question, remarks Dr Marshall in a note to me upon this subject, the general law which led to the adoption of this remedy, is it not strange that Physicians have not been induced to try it by analogy?
In young healthy and robust women and in such as have the nervous system strongly developed cases of suspended labor are most generally met with and in such cases the means used to afford relief are general blood-letting carried far enough to produce syncope, or at least a sinking impression, a full dose of opium or some other narcotic and the ~~commutation~~ secale which latter remedy acts by causing violent irritation of the mucous membrane of the intestinal canal and general prostration.
Now all these remedies which have been found so efficacious in this disorder act as sedatives. They diminish the vital powers of the system and exactly in proportion as they cause a speedy diminution

of these pains do they produce the desired effect the contraction of the uterus.

In view of the above facts and circumstances is it not natural that we should be led to use of Ice in the manner we have mentioned?

And should we not give so simple and harmless an agent the preference over all other means, since its impression is so temporary, its operation completely under our control and its exhibition unattended by any of those unpleasant consequences which frequently arise from the remedies now commonly used?

An
Inaugural Dissertation
on
— Tetanus —
Submitted to the examination
of the
Provost. Regents. & Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
By
— W. Allen Pierce —

1847

To
Nathan R Smith M D
Professor of Surgery in the
University of Maryland &c &c
this "Thesis" is most resp
ectfully dedicated by
his pupil in consideration
of his Kindness while
under his care W Allen Pierce
Balto. Feb. 1st 1847

Tetanus

Gentlemen

In compliance with the just requisitions of this institution I have prepared and respectfully submit a Thesis upon a subject of vital importance both to the practitioner and his patient upon a disease of the most fearful character which too often even under the most favourable circumstances of skill and attention seals the doom of its Subject

"Hæret lateri lethalis arundo." Virg.

The pathology of "Tetanus" is obscure but not more so "me judice" than any one of those nervous diseases which producing violent symptoms end in death leaving no distinct traces behind them I cannot

but think that we may safely conclude that the disease is produced by x{inflamation x of the Spinal cord or some of its Motor nerves the brain not being involved

Irritation

If you irritate mechanically the Spinal cord of a recently decapitated turtle you produce spasmodic contraction of its limbs What difficulty is there then in supposing that some mechanical irritation existing in the Spinal canal of a human being may produce similar results

Again

If you irritate any of the nerves proceeding from the Spinal cord in their course you produce a contraction of the Muscle to which that nerves goes and

throug which it ramifies and also the muscles of the opposite side

Dr Marshall Hall in his division of tetanus has thrown a strong light on the pathology of that disease which he divides into Central and Centripetal We sometimes find the Spinal cord inflamed and the consequent tetanic Spasm Again after death from tetanus we find none of that irritation in the Spinal canal which we know has exsted elsewhere inasmuch as we are aware that there is no part of the motory system which is not supplied with nerves from the Spinal cord The first of these Dr Hall calls Central the latter Centripetal

tetanus

We are therefore advocating no foolish theory in supposing with Dr Hall that the central proceeds from irritation of the spinal cord and the centrepetal from some of the motor nerves

Dr Williams observes in his pathology that the pathological cause may be as in other modifications of irritability either an irregular supply of blood to the part or irritation of the motor nerves direct or indirect by which the muscles are excited And in all the examples we may take of patients who suffer from this most distressing malady we may safely come

to the conclusion that it is a disease of the Spinal Cord or of its Motor nerves

The ancients and indeed some of our Modern practitioners supposed that the disease was caused by small spiculæ of bone lodged in the Spinal canal and this to a certain extent may be true for in some instances these spiculæ of bone have been found in the Spinal canal but it would be very unreasonable to ascribe every case of tetanus to this cause because in some cases of death from tetanus no irritation or irritating substance has been found in the Spinal Canal

I therefore assert that tetanus is a nervous

disease proceeding either from the Spinal Cord or some of its Motor nerves and shall proceed at once to give the different divisions according to the best writers

Trismus or Locked jaw Opisthotonos or the bending of the body backward Emprosthotonos or the bending of the body forwards Pleurosthotonos or lateral inclination of the body Tetanus may be either chronic or acute Chronic when the disease commences slowly and continues mild usually ending in health Acute when the disease seizes upon the patient with the most fearful rapidity most always ending in death

This disease is also classed under two other heads as important as the two last namely Idiopathic and traumatic. Idiopathic is said to arise from some morbid condition of the body or lesion of the spinal cord Traumatic from some mechanical irritation Symptoms

In the begening of this disease in most cases the patient to complain of stiff neck or what he calls a cold he will prehaps tell you he has sprained his neck by a fall or by sudden turning of it He will also find soon after this that his lower jaw does not rise and fall with its accustomed facility at last the jaws close sometimes with

remarkible slowness but with
severity and firmness and at
other times perhaps while at
meals with such facility
swiftness and force as to
terribly lacerate the tongue
fracture the teeth or dislocate
the inferior Maxillary bone

Very soon after this the patient
evinces a difficulty in the
act of deglutition which symp
ptom is a characteristic sign
that the Muscles of the
fauces are spasmodically
affected The patient feels
a most piercing pain pro
ceeding from the lower part
of the Sternum to the first
second and third lumbar
vertabræ which we must

ascribe to the spasmodic con
traction of the diaphragm
and thus the disease proceed
ing either slowly or rapidly
yet with great surety encloses
the miserable victim within
its vice like grasp The hands
sometimes escaping

It is stated
by some authors that the tetan
ic symptoms begin in the
part mechanically irritated
Of this I can say but little

All the muscles of the face
are concerned in this disease
being spasmodically contrac
ted giving to the patient
that horrid expression of
Countenance (Risus Sardonicus)
so characteristic of the disease

The Muscles on the forhead are contracted both longitudinally and transversely and the eyebrows by the action of their corrugators are closely approximated forming a short angular curve at their inner and highest part The Eyes are not so much exposed as they are naturally the Orbicularis and levator palpebræ almost completly neutralizing each other The eyes are distorted and fixed the Orbicularis Oris is tightly drawn across the teeth exposing them slightly or altogether the tongue is sometimes caught between the teeth and the salva mingled with blood trickles from between the grinding teeth aggravating the

already horrid expression of countenance

The sphincters are usually contracted the bowels constipated {partly owing to the contraction of the Muscles and partly owing to the functional derangement which prevades the System} So much so that it is with difficulty we can obtain a discharge of fæcal matter and when we do it is so much changed and of such a remarkible fœtid odor that in the wards of a hospital all those who can crawl from them will do so

The tongue is generally moist at the commencement of the disease but subsequently when the perspir

ation becomes profuse attended with fever and inflamation excessive thirst then the tongue becomes dry

The perspiration is excessive and of a remarkible foetid oder especially during the exascerbation but when it extends oper the whole body it is unatended with the least amelioration of the symptoms A Miliary eruption frequently accompanies the perspiration occasioned probibly by the excessive determination of the skin the skin is hot and is over the natural standard of the body

The Muscular fibres at the neck of the bladder and in the perineum are contracted causing

retention of urine which during a relaxation of the exascerbation is forcibly ejected being scanty and high coloured no doubt owing to the excessive action of the skin The abdomen is tense and hard

The function of the brain remains free and uninterupted until within a few hours of death when delirium in most cases supervenes

In some patients the exascerbations are accompanied with relaxation in others with violent jerking so that Opisthotonos becomes as quick as thought Emprosthotonos

The traumatic form of this

disease is considered much worse than the Idiopathic The former may result in a few hours after the injury and terminate fatally in other cases the wound may have cicatrized and embraced within it a portion of the injured nerve which may be the ultimate cause of the disease

Having I think sufficently explained the symptoms of Tetanus I shall proceed at once with the diagnosis

To form a correct diagnosis is a most important part in the practice of Medicine and unless we do form a correct one we are treating that of which

we know nothing and are continually placing the life of our patient in danger

It is in this way that the celebrated quack of our day gets his reputation who does not know what he is treating with his all powerful medicine but happens to strike sometimes the right spot Not so with the regular graduate who manages a disease on scientifick principles after a proper diagnosis

The diagnosis of tetanus is sufficently clear to all who will pay particular attention to its most prominent symptoms and although some of them bear a great simility

to those of some other spasmodic diseases yet I do not think the close observer can possibly be mistaken

Yet it is proper I should here enumerate the different spasmodic diseases which bear the greatest likeness to tetanus and compare the different symptoms in order that we may arrive at a correct conclusion

In Hydrophobia we have spasmodic contraction of the fauces the patient unable to swallow and every time the attempt is made an exasperation is brought on but this is one of the wild and maniacal style while

in tetanus the patient is extended as if he was on the rack yet he is free from delirium and will recognize his friends appearing willing to take anything the Physician may prescribe Another remarkable fact which distinguishes tetanus from Hydrophobia is that in the latter the exascerbations are frequently relaxed while in tetanus more especially in the acute form there is very seldom if any intermission Yet in tetanus as in hydrophobia the sudden opening of a door the loud talking of any one in the room or even the

voice of a parent will bring on the Spasm

Hysteria has some symptoms which are seen in tetanus but I think hysteria is a disease too palpable to be mistaken

Prognosis

I think a too hasty communication made to the patient has a fatal tendency it will if our prognosis be unfavourable depress him at the very moment he ought to be sustained

Of the prognos is of tetanus little can be said unless it is that it is very unfavourable

and although the physi
cian gives such remedies
as he thinks will conquer
the disease yet he must
always despends of a
succesful termination of
the case

But if they do
terminate succesfully
it is slowly Mr Lowlong
states in his excellent work on
tetanus that in fifty eight
cases which terminated succes
fully Eight were cured in
the course of a week Three
in ten days Four in two
weeks Four in two months
Four in one month Three
after two months and in
two the symptoms did not
disapear until the end of

three months

And even after the Spasmodic action has subsided it is a long time before the Muscles recover their proper tone and freedom of action It is well known that in cramp of the leg the Muscles are not capable of so free an action for some hours after therefore when such violent Spasms occur as take place in tetanus when prehaps some of the Muscles are lacerated we are not suppriseed that the return to health should be so gradual

causes

First we shall notice

the predisposing cause which may be placed to the sudden vicissitudes of heat and cold to the morbid condition of the bowels and the nervous temperaments In the next place of the exciting cause which are many for indeed the most absolute trifle may produce this disease in its worst form It has been thought that worms in the intestinal canal would produce tetanus and indeed I think this a very good idea because we well know that worms in the intestinal canal will produce a nervous excitibility which sometimes produce spasm

A slight scratch has been known to produce death in twenty four hours which I believe is the quickest death from tetanus on record

Treatment

The treatment of this disease must be energetic and prompt and for the cure of this disease many remidies have been recomended

Amputation

Little can be said of this treatment although Mr Curling states some few have recovered yet we know that in amputating a limb we must necessarily divide a great number of nerves and the

system being under such
universal nervous excitement
I should think it would
be extremely hazardous
and we would be placing
the life of our patient
in double jeopardy unless
indeed the circumstances
were such that would
compel us to amputate
division of the nerves
This
operation has been perfor
med by Baron Larry and
with great success and
this operation in my opin
ion is also a very dang
erous semicidy unless it
be performed at a
very early period and
then I think we would

be justifiable at least from the accounts we have heard of it we are justifiable in giving it a trial paralysis may supervene but it may not continue long and if it does I think it would be better to have a paralysed limb than no limb at all at least it has a great many advantages over amputation

Our constitutional treatment should be prompt and active Purgatives should be given at first not in small doses but in such as will act with celerity and rapidity as to cause a full evacuation of the

bowels so that the remedies we may afterwards employ may have a more decided effect upon the system for this purpose we may use Ol Ricini, Ol. Terebinthinae Ol. Tiglii more especially the latter as we can by placing a few drops upon the tongue or by rubbing it on the skin have a discharge per rectum

Having removed any source of irritation in the intestinal canal the next important indication is to allay the excitement which prevades the nervous system giving rise to undue nervous excitement For this purpose

depletion with all kinds of sedatives and antispasmodics have been used sometimes with great success at others they have totally failed

Digitalis and Tabacum these remedies or rather poisons have such a powerful effect upon the voluntary muscles that I should fear their action on the involuntary

Muskt this remedy is one of our most powerful antispasmodic and has succeeded in some cases of tetanus and therefore demands a further trial

Carb Ferri

of this remedy much has been
said both to its advantage and
the reverse and as it requires
a long time for its action I
think we should look for
something more active

Blood
letting and Mercury are known
to be great remedies in all
inflamations and must
be used but with judgment
as also Opium of which
vast quantities have been
given with alternate succes
And now Gentlemen in
conclusion let me state that
in this dissertation there are
undoubtedly many errors as
well as Omissions which I
hope you will overlook as
not of the mind but of
the pen I now have now

nearly finished my collegiate studies and as to my qualifications you are the best judges

I have the honor
to be Gentlemen
Yr. Most Obt. Svt.
W. Allen Pierce

An Inaugural Dissertation 1

on

Dysentery.

Submitted

to the Examination

of the Provost, Regents, and

Faculty of Physic, of the

University of Maryland.

for the Degree, of Doctor of

Medicine.

By.

Thomas. H. L. Smith.

of

Clinton

Mississippi

In composition of this sort it can hardly be expected, for a Student to advance anything new, or interesting to so learned a body, as the Faculty of the University of Maryland. It will be hope, be sufficient for him, to arrange and Classify his Subject, in a plain and Comprehensive Style: in order to do this he must I conceive, understand and comprehend distinctly, what it is that he proposes; and whether he is about to adopt, the most Easy, direct, and effectual means, for obtaining his end, atleast so far as he has been able to gether and collect from writtings of Authors which have been placed within his reach and also from his preceptors. Having stated, what I shall depend on for my Dissertation

I commence with Dysentery.
The name of this disease is derived from two Greek Words. δυς difficulty and εντερα, the Bowels. The Malady itself belongs to the Class Pyrexiae and order profluvia of Cullen's Nosology and is characterized by a disordered state of the Bowels, in which the functions are performed with pain and difficulty. Dysentery has sometimes been confounded with several other disorders of the Bowels the the principal of these, is Diarrhoea; that there are certain characteristic symptoms of Dysentery which sufficiently distinguish it from Diarrhoea is obvious enough. Both of them may be accompanied by griping pains in Both the Stools and

frequent and loose; but in Diarrhoea they are fecal in Dysentery there is a retention of the Natural Faeces or they are expell from time to time in small hard. Seperate lumps termed Scybala. Again Straining and tenesmus and the Excretions of Mucus, which is often tinged with Blood, form no necessary feature in Diarrhoea whereas in Dysentery these Symptoms are prominent and constant.
These Nosological distinctions are truthful, although we are not able always to point them out in every case, For some of the worst forms of Dysentery, commence with the ordinary symptoms of Diarrhoea. —
Perhaps there is no disease embraced within our system of nosology that requires more attention on the part of the Physician than the

one now before us. But although much has been written on this subject and innumerable remedies for it have been recommended, we have still much to learn both with regard to its nature and cure —
Dysentery generally makes its appearance in this climate about the close of summer or the commencement of Autumn; during these seasons, the state of the atmosphere is ripe to the production of the remittent and intermittent forms of fever,
In general for sometime previous to the attack of the disease, the intestines are somewhat torpid, affected by flatulency and pains, resembling those of colick. In other cases however, (as I stated above) the Disease is ushered in by an attack of Diarrhoea

In some Cases before the Bowels are disturbed the Patient labours under feelings of lassitude and indisposition to motion with symptoms which indicate the Coming on of fever. The Patient now begins to feel a uneasiness in the Bowels, which prompts him to make frequent efforts to produce an Evacuation: but these efforts are increase with little or no relief— annoys the Patient and Constitutes what is termed a "Tenesmus——

The Pyrexia that attend this disease sometimes begins before the Local Symptoms declare themselves, more frequently it succeeds their manifestation. Occasionally the fever runs high. the pulse hard and frequent, the Skin hot, the face flushed, and the tongue furred: and the Patient Complains of head ache and thirst

But in this as in other abdominal diseases, the pulse soon becomes small and weak, the strength rapidly declines, and the temperature of the body sinks, — —
The matter voided by stool in this disease whether of a long or short duration is very various;
A mucus matter is sometimes voided. called by some, the Morbus-mucosus and by others Dysenteria-alba But for the most part the mucus discharge is more or less mixed with Blood, and termed the Bloody-flux of our old authors; films, and membranous shreds and mossels that resemble flesh often too come away, soon the Bowels. unless the disease be checked at this period; the straining increases and the tenesmus becomes more considerable — —

The fever also which is mostly of the remittent form increases— the Stools become more frequent and painful— no Excrementitious matter is discharged, unless the Patient be under the influence of a Cathartic, and then it is voided in hard lumps or Scybala: after which the Symptoms are somewhat relieved: this relief is but of short duration: for the troublesome Symptoms often return with redou-bled violence, which tends rapidly to lessen the Patient's strength and cause a speedy death— The Diagnosis. There are three diseases with which ~~the~~ Dysentery may be possibly ~~be~~ Confounded, viz, Diarrhoea Cholera Morbus and Haemorrhoids, The discrimination however between Dysentery and the first named disease, may be made by attending

to the following circumstances
In Diarrhoea the alvine discharges
are generally copious consisting
chiefly of natural faeces, and
rarely accompanied with fever.
In Dysentery the natural faeces
are atleast for sometime retained
and when they are evacuated
appear in small hardened masses:
it is attended at the same time with
considerable degree of fever,
severe griping and tenesmus and
stools are for the most part extre-
-mely fetid. Tenesmus sometimes
occurs in Diarrhoea but it is by
no means so violent as in
Dysentery. As regards its
complication with the two other
diseases, I deem unnecessary to
say anything, for its diagnostic
signs, are plain enough—

In general the Dysentery of our Climate may be cured by early treatment: in many cases they yield to a few doses of cathartic medicines. But we learn from writers and Physicians who have Practised in the tropical countries that Dysentery comes on with great violence and proceeds with extream rapidity to a fatal termination, notwithstanding the early and judicious treatment. In those Climates as well as our own, Dysentery is much more manageable when it appears as a sporadic than as an epidemic. These circumstances should therefore be weighed well, when we are about to form a prognosis. It may be proper to state that age

and habit too, are to be considered, for Dysentery is particularly more fatal to persons far advanced in life and to Children, as most other diseases of the intestines, than to adults. We may calculate upon a favourable issue if the disease has not far advanced, the symptoms moderate, the strength of the patient not much diminished and the appetite good, But if on the contrary, the disease has gone on for sometime the symptoms greatly exaggerated, the strength gone and the patient greatly prostrated, with cold extremities, and the stools passing involuntary of a fetid odour. We may expect generally an unhappy result

Dysentery is brought on or produced from various causes; such as exposure to wet and cold, the use of unwholesome food; to the agency of Malaria, excessive fatigue, either of body or mind, intemperance in the use of ardent spirits, &c. seem to be among the principal causes which are influential in the production of Dysentery. But from the concurring testimony of all the authors I have read agree that, heat and moisture alternating with cold, the former as a predisposing and the later the exciting causes of this disease, Hence the poorer class of people and particularly soldiers (who are much exposed to the

to the sudden vicissitudes of the weather; are often the unhappy victims of this malady. Marching, or engaged in actual conflict, during the day; bivouacking at night, often in the open air and under every variety of weather; ill provided too with clothes and bedding, their food scanty, precarious, or of bad quality; seizing every opportunity that may offer itself, to indulge in their intemperate habits; we need not wonder either at the prevalence of Dysentery among them or at its untractableness while they remain subject to the same morbid influences.

The very frequent coincidence or alternation in some

places of Dysentery with intermittent fever has given rise to the opinion that both these Diseases are alike attributable to the malarious poison in what manner is not altogether understood; it is supposed to arrise from conjestion of the veins, which convey the Blood from the rectum, and colon.—
upon such conjestion inflam-
-mation is readily set in—

Treatment

Dysentery is a Disease over which the Physician has more Controul, or which admits of more certain cure, upon a speedy application of proper remedies than most other diseases of

the intestines when in its incip-
-ient stage. The contrary however
has been ascertained that
their is no disease more diffi-
-cult of cure when suffered
to run on for any length
of time.
It is evident that the cure
of Dysentery must in a
great measure be regulated
by the violence and duration
of the symptoms which have
been enumerated above.
When the disease comes on
in a mild form, and in its
incipient stage it may be
easily removed with mild
saline purgatives, followed
by opiates.
But on the contrary when
it attacks the system with
violence, then it will ~~it~~

in general require our most efficacious remedies to arrest its rapid progress. The remedies are 1st Bloodletting the indications to be fulfilled are these, when we are called to a patient and find the febrile and inflammatory symptoms considerably and accompanied with much pain; Bloodletting should be immediately resorted to and repeated as often as the urgency of the symptoms may require. The Bloodletting of which I have been speaking is general, now when we have carried this as far as the the strength of the patient will allow; and the symptoms not abated then we must resort to local Bloodletting, warm fomentations, &c

Our next treatment must be Purgatives and the cure in a great measure depends upon a judicious administration of them which tend to relieve the griping and tenesmus, to remove impacted and hard faeces, which is one of the sources of irritation; and in fact to relieve the intestines of a vast accumulation and lessen the vascular excitement. The best of these Purgatives are those which procure a sufficient evacuation without being very stimulating to the intestines. For this purpose the neutral salts have been employed. Sul-Soda and Sul-Magnesia are among the best

The Oleum ricini has been given with advantage in some cases. —
Calomel has been highly recommended by some and disapproved of by others; combined with opium it is a valuable remedy I think in some cases; especially after we have tried other remedies in vain —.
Mucilaginous and oily Injections are of particular service, when the pain, griping, and tenesmus is severe they sheath the intestines and prevent or defend them from the action of acrimonous matters, which they often contain and afford signal relief by their actions

These are the remedies which I conceive to be proper during the inflammatory stage of the disease —
The diet must be very sparing, of liquid food. Arrow Root, Milk &c
The Drink should be of the demulcent and mucilaginous kind such as Barley-water, rice-water, Solution of Gum Arabic &c

Ex

To William Power, M.D. Professor of Theory and Practice of Medicine, in the University of Maryland, this is respectfully dedicated as a testimonial of his talents, and a sense of obligation for the advantages which have been derived from his system of instruction.

By the author

An Inaugural Disertation On Chlorosis,

Submitted to the examination of The Provost – Regents & Faculty of physic, of the University of Maryland, for the degree of Doctor of Medicine

By

Alfred Lanyre

Baltimore February 3d 1847

On Chlorosis.

Innumerable are the ills, which the profession of medicine unfolds to our melancholy contemplation, as the attendants on the human system. No age, or sex, is exempt from the ravages of disease; alike, its cruel stroke falls upon the tender babe, and the decripid sire; the timid maiden, & the stern and strong, the youth in all his loveliness of form, and tender virgins blooming into womanhood. Amidst the various afflictions, which Divine Providence has been pleased to accumulate upon the humane frame, and with which Hee has chosen to visit the creatures of his hand, there is not one, so distressing, and so deserving of our sympathy, as that disease which I have selected as the subject of my thesis, & which is frequently found invading the ranks of those, who have ever been the ornaments of society, & the fond companions of man, I mean Chlorosis.

This is a disease, to females the more painful

in its endurance, the more wounding to their sensibility (if the pathology and cause which some have assigned to this malady are to be credited), as it marks them with a stigma by which their pride and modesty are continually harassed, & which, if universally believed, would destroy their charms, diminish their amiability, and force them, in melancholy sorrow, to seek the shades of solitude, to retire from the haunts of friends, & abandon all the social enjoyments of life.

Chlorosis, as its name evidently indicates, from the Greek word χλωρος, green, is generally known by the designation of green sickness. Though confined almost exclusively to female youth, this singular disease is found, though rarely, occurring in the age of childhood; more frequently, however, in the circle of married females; &, strange as the idea may appear, occasionally in the ranks of young men unblessed with manliness of form, & moulded by nature's hand more delicately than the other part of their sex.

The symptoms usually attendant upon this disease are insidious, but gradually progressive in their development. In the early stage of Chlorosis, the indications of disease are scarcely perceptible, & may readily elude the observation of friends, or the notice of the unobservant physician. Still, however, there are certain marks, even in this early period, that indicate the onset of the disease. The careful observer, if he notes the countenance, the disposition, the habits, & the condition of the patient, will discover, that there is a fading of the wonted hue, a paleness of complexion, a languidness and disinclination to mental or corporeal pleasures, with restless nights, a torpid state of the intestinal canal, a deranged condition of the stomach, with occasional palpitations, and pains in the head & hypochondriac regions. These symptoms soon give way to others of a stronger, & more marked character. The countenance, which, at first, wore a slight &

scarcely perceptible paleness, now assumes a pallid aspect approaching in some to a snowy whiteness, in others, assuming a greenish cast tending to a cadaverous aspect. The lips, the tongue, the internal parieties of the cheeks seem to be drained, as it were, of blood, whilst the conjunctiva and the general surface of the body, especially the fingers, become completely exanguious. One of the most characteristic symptoms of the disease, is a puffiness of the upper & lower eyelids, which is more strongly marked in the morning, in consequence of the recumbent posture during the slumber of the night. The face becomes partially tumid, and the eyelids assume occasionally a greenish, sallow tinge, whilst, not unfrequently, a streak of a dark or leaden hue encircles the lower eyelids. Another remarkable symptom is to be drawn from the fact, that when the disease has slowly progressed in its

course, the entire body, from the face to the feet, becomes very pale and exanguious, whilst the latter, and particularly the ankles, are affected with oedematous swellings, in consequence of the blood, as Dr. M. Hall justly observes, becoming attenuated, the serum seperating from the crasamentum must find its way into the cellular tissue, and thus produce this anasarca and oedematous condition. The hands & fingers have a white, puffy appearance; the nails are devoid of their ordinary colour, and become exceedingly brittle. The tongue, which is pale, much swollen, and marked with slight elevations assimilating a tubercular form, and occupying more than the ordinary space in the cavity of the mouth is pressed upon by the teeth, and thus becomes marked with indentations. The general languor and listlessness, which prevail at the commencement of the disease, become more and more aggravated, whilst the indisposition to exertion is found

to increase. The palpitations of the heart become stronger, and more frequent; the pains in the loins and hips are more sensibly experienced, accompanied with headache and a bourdonnement or ringing in the ears. The energies of the mind too are impaired, and the patient becomes drowsy and inactive. As the disease advances, the pains in the hypochondriac region increase in intensity, and, in many instances, the patient is harassed with cough and acidities in the stomach. In the majority of cases, the appetite is morbidly deranged: all desire for substantial food is abandonned, and there exist a preternatural craving for chalk, slate pencils, lime, cinders, magnesia, in fact, for many indigestible, and all absorbent substances. Throughout the entire course of this affection the bowels are generally torpid, with occasional attacks of diarrhœa and tenesmus, the fæces usually presenting a very unnatural

appearance, and the urine remaining thick & sedementous. Should the disease continue for sometime, slow but gradual emaciation ensues; the muscular debility is increased, and the pulse becomes small, frequent, quick, & corded; the pains in the head are increased, and the tongue gradually acquires a smooth surface, and exhibits a semitransparent lilac appearance. The catamenia are found greatly deranged, if they have not previously ceased, and are attended with distressing pain, whilst the discharge itself becomes paler, and diminished in quantity, and not unfrequently terminates in profuse leucorrhoea. Such are the general symptoms that characterize this disease; authors who have written upon this subject, and particularly Dr Marshall Hall, assert, that the auscultation of the blood vessels

affords singular phenomena, that may be considered as symptomatic of Chlorosis. Amongst these one is particularly noticed, a sound, which, from its resemblance to the diable or humming top of children, is called bruit de diable. This sound, it is affirmed, is heard most frequently in the course of the carotids, and the abdominal arteries, and occasionally, though with not the same intensity, immediately above the crural arteries. Vague is the idea in regard to the ~~sound~~ cause of this sound; yet, all seem to unite in the opinion, that it is dependent upon the the predominance of the watery portion of the blood.

From the insidious character of this disease; and the severity of its predominant symptoms, Chlorosis might readily be mistaken for one of an inflammatory nature. But, notwithstanding the palpitation

of the heart, the pain ~~in~~ of the side, and the affections of the head, Chlorosis, unlike inflammatory disease, will be found to manifest but slight tolerance of the abstraction of blood. The diagnostic symptoms descriminating chlorosis from insidious organic disease are more easily detected. The peculiar bloodlessness, and semitransparent palidness or lilac colour of the prolabia, would distinguish it from jaundice & all organic diseases. The absence too of the icteric appearance of the conjunctiva and of the surface generally, the non-presence of clay coloured faeces and bilious urine, & the absence of pain and tension in the right hypochondrium, which are ever attendant upon organic disease of the liver, will serve as descriminating marks between chlorosis and hepatic affections. The irregular affinities of the stomach serve also as distinctive indications of this disease. Another source of distinction is to be found in the contemplation of

the patients countenance. In chlorosis, there are no distortions of the countenance unless it be in extreme cases of the malady, whereas, in organic affections the face presents evident marks of great pain, and intense suffering. The causes of this disease are various; and some of them, as stated by a great many authors, would cast a very serious charge on the character of ~~the~~ females - This disease was supposed by Cullen to attack females only who were labouring under a retention of the menses; but this assertion would limit too narrowly the sphere of the disease, and is unfounded, inasmuch as it has attacked females while evidently they were uniformly regular in the catamenial discharge. Others, who have written upon this disease, regard it as an affection entirely dependent upon a vice of the uterus; but they certainly must have erred in giving this opinion, since this disease is not confined exclusively

to the feminine sex. Mr Carbonis (Rapport du physique et du morale de l'homme) states, that he has seen young boys attached with chlorosis, and Dr Marshall Hall, remarkable for his care and observation, unhesitatingly declares, that in families, where chlorosis prevails amongst the females, it is no rare phenomenon to find the male members labouring under the same or a similar affection.
In corroboration of this opinion, and as a fact that males, no less than females, are victims to this disease, I may point to the wards of the Baltimore infirmary, which, during the present medical session, contained within its walls a youth of about fifteen years of age evidently labouring under this disease, and pronounced a chlorotic patient by the able professor of the practice of medicine, to whose care the youth was committed.
The celebrated Hoffman endeavoured to prove, that in every circumstance, the derangement of the digestive functions

was the true cause that produced the discoloration of the skin peculiar to the disease which now occupies our consideration. Another cause of this disease is sedentary occupation. Hence, says Dr Marshall Hall, the mimosis decolor is the prevailing affection of those females who, in manufacturing towns, are doomed to sit from morning till evening at the lace frame, or the tambour, or who are engaged during many hours of the day in mending, seaming &c. Unwholesome & indigestible diet, particularly when accompanied by indolence; want of cleanliness, and of exercise in the open air, are so many alledged causes of this malady. Prolonged lactation, frequent haemorrhages, especially those of a menorrhagic character; leucorrhoea; the depressing mental affections; long continued & exhausting labour, and unsatisfied sexual desires are also enumerated as the frequent causes of this disease. In Europe, where privations and poverty are more generally

known, Chlorosis is frequently met with; but in this country, where all the inhabitants, to the very meanest, can enjoy the rich supplies of nature, and not unfrequently can reach the luxuries of life, the number of cases is greatly diminished.

Another cause may be drawn from the mode of treating this affection. From the fact, that, whatever may be the contusions as to the cause of this disease, nearly all agree in one particular, that the internal administration of iron is highly indicated; and, that this remedy seems to produce a wonderful and beneficial effect, & is always to be employed; & from their unanimity in the opinion, that in this disease, there seems to be a great affinity for iron, I am inclined to believe, that the absence of the proper quantity of iron in the blood is one, if not the principal, cause of the disease. This opinion is strengthened by the fact, that, in all healthy persons,

the analysis of blood proves that iron is one of the constituents of that fluid. Nor is this mode of reasoning strange, forced, or absurd. It is but drawing a conclusion from analogy similar to that which is universally admitted in the case of scurvy, which is said to be a blood disease in which the blood is deprived of some essential ingredient, which the juice of lemons, & other fresh succulent vegetables readily supply. Might not the same with propriety be said of Chlorosis; that it is a disease depending upon an impoverished condition of the blood, and only yields when that fluid has been supplied with that essential element, Iron, which is so justly lauded as a remedy in this distressing malady?

As a still farther argument in support of this opinion, it is stated, that, in persons, who have lost a great quantity of blood, if an additional portion be

taken from a vein in the arm, and the blood exposed in an open vase, it will coagulate, having a small clot floating in an abundance of serum, and that small clot will be of a light rosy colour, showing a great diminution in the proportion of fibrin, and a still greater deficiency of the red particles.

Again, the idea which we have advanced seems to be confirmed by ~~post mortem~~ examinations made upon patients who have died of chlorosis. Dr Marshall Hall mentions a case, which was fatal, and where the patient died precisely as one would die from the loss of blood. Now, pathological investigations show, that the red particles require more time for their restoration than any of the other constituents of the blood, and the remedies most exalted are the preperations of iron in conjunction with inspiration of pure air.

Treatment –

In this anæmic disease, the chief indication should be, to restore the empoverished blood to its normal standard.

For this purpose, the best remedies would be a nutritious diet (of which, ferruginous chocolate would be a most excellent article), and the employment of the chalybeate waters; amongst which, the Saratoga Springs seem, from the greater quantity of iron that the waters contain, to stand decidedly pre-eminent. In addition to these simple, but effectual remedies, may be enumerated the various preperations of iron; as, the sulphate, the muriated tincture, and the carbonate of iron, or the excellent preparation of Griffith, the mistura ferri composita. Quinine, and Vallet's proto-carbonate of Iron, & the chalybeate bread, as well as, rich, animal, food are highly indicated as remedial

agents in the treatment of this disease. In cases of great prostration, wine, brandy, and the ordinary stimulants, adapted to the strength & constitution of the patient, are highly serviceable. Strict attention must be paid to the condition of the bowels; whilst torpid, active aperients, as aloes, massa hydrargyri, and small quantities of rhubarb and jalap should be steadily, yet cautiously employed. To mitigate the pain, which is sometimes excessive, a few cups over the hypochondriac region will be found of the utmost service. For the severe palpitations, which are often experienced, æther, Tincture of assafoetida, digitalis administered with caution, sinapisms, and counter-irritation induced by Granville's lotion may be employed, and frequently with marked benefit

to the patient.

In those cases of Chlorosis complicated with a derangement of the menstrual discharge, our attention must be directed to the uterine derangement: hence, emenagogues, in conjunction with the remedies enumerated, are highly indicated; & for this purpose, the ferri mistura composita would be an excellent remedy, as well as the favourite treatment employed by Dr Marshall Hall, which consisted in the administration of two grains of Barbadoes aloes, and the same quantity of the sulphate of iron, to be taken daily during the mid-day repast. In this complication of the disease, as well as in the other forms of Chlorosis, exercise, gestation, diverting recreations of the mind & body, will be found eminently serviceable, & calculated, in many cases, to abridge, if not entirely remove the disease.

An
Inaugural Dissertation
on the
Sequalae of Malarious Fevers
Presented for examination
to the
Provost, Regents and Faculty of Physic
for the
Degree of Doctor of Medicine
by
Grafton M. Bosley

Dedicated
to
William Power, M.D.
With the greatest
respect for his talents, and
gratitude for his kindness,
by the
Author.

There is no variety of disease that we are more liable to meet with in the practice of Medicine than Malarious fevers, particularly in certain districts, and no one in their treatment that requires more attention and skill on the part of the Physician than do some of its forms. And yet after the disease has been cured there often remain certain alterations, some of which are dormant for a season, that equally excite our interest and attention. Perhaps they are more interesting, from the fact that there is less known about them.

Of this latter variety we wish particularly to speak And although we may not

be able to mention anything original, yet we shall treat of them as we learn from books, but principally as we have seen them in the Almshouse during the past year.

We think there is not one single disease that we meet with in practice that presents half so wide a field for speculation as dropsy — no one in which so much is known, and yet so little that is certain. However enough is known to make it one of the most interesting subjects in the nosology of diseases — it offers to the lovers of Medicine a never failing source of interest, the causes of which in themselves afford far too ample a theme

for the short limits of an ordinary thesis.

But we wish to speak of that variety alone which is caused by Balanous-fenis-merely noticing the others incidentally. Before considering which we shall notice briefly dropsies in general, in order that we may better understand the subject under consideration.

Dropsy- by which term we mean a serous effusion into any shut sack or cellular tissue- as a disease was recognised as far back as we are able to trace the history of Medicine, but the causes of which have always been a subject of warm discussion and about which many in-

genious theories have been advanced. And it was not until within the last fifty years, that the Profession came to anything like a rational conclusion as to the possible cause. We believe that that the truth of it was that too little was known about the theory of absorption with which it is intimately connected — for a knowledge of one implies a correct understanding of the other.
And by a reference to their works we see that they were ignorant of almost the first principals of absorption as now understood and believed to be correct. As a single example of their idea of dropsy and its relations

to absorption we re=
late the following— they say
that dropsy depends upon
want of tone in the absorbents
— that the superfluous fluids
are not sufficiently taken
up by the absorbents— that
they are deficient in energy.
Accordingly with this view
they commence the treatment
— they stimulate the absorbents,
and it does not take the wis=
dom of a Solomon to see that
this must fail to effect a
cure.

In the first place it is
not caused by a deficiency of
action in the absorbents— for
there is no disease that we
see, where absorption goes
on more rapidly— none where
emaciation advances with

more rapid strides.

And further the effects of mercury upon a patient labouring under this disease — the great rapidity with which it effects the system, makes very plain the fact that instead of there being a diminution of action — there is an increased action.

The theory that is now generally received, is that mentioned by Watson — which is — that absorption is carried on by the lacteals lymphatics and veins. The lacteals absorp the chyle from the alimentary canal, and carry to the blood the materials for its renovation. The lymphatics take into the blood the discarded portions of the

body, which requires to be removed in order to make room for fresh deposits. The veins imbibe the serous fluid exhaled from the surfaces of serous membranes, and into the meshes of the cellular tissue, as well as poisons and other substances that are soluble and are dissolved in them.

From this it is plain that there is an intimate connection between the blood and the absorbents - that there is an ~~intimate~~ mutual dependancy - disease in one may produce it in the other, and as they ramify all parts of the body, may effect part or the whole of it.

They may be altered to produce dropsy - first by the quantity of fluid exhaled

being increased, the absorbents remaining the same – secondly by the absorption being diminished the exhalation remaining the same, or else the exhalations may be increased whilst the absorption is either lessened or not proportionally increased.

We have examples of the first – Acute dropsies – Hydrothorax and some forms of Ascites

Examples of the latter are found in the various forms of dropsy following on venous obstruction, where the effusion still exudes, but owing to the obstruction of the vein or veins, whose office it was to convey the secretion, it continues to accumulate until we have formed dropsy.

Alterations of the blood from its healthy condition, is also a common cause of dropsy - such forms we find following Malarious fevers.

Perhaps we have gone far enough into the theories of dropsy, without noticing the one under consideration - far enough to have not even proved that there is such a variety of dropsy. For although we believe it is acknowledged by most Physicians, yet we have never seen it recognised as such by any author. Nevertheless we think that the proof for it is as good or better than any other form.

We have in fa=

vour of it in the first place - that it happens soon after an attack of Intermittent or Remittent fever or even before the chill has been cured - secondly when thus happening there is an absence of all other known exciting causes. And thirdly taking it for granted we are able to account for it upon the most approved facts in Medicine.

That a poor or watery state of the blood is sufficient to produce dropsy of itself, is plain from the fact, that injecting matter in quantities into the veins of an animal will cause watery effusion - or discharges, whilst the injection of

blood or serum
has no such effect. Persons
who have lost much blood are
liable to become dropsical
from the same cause - the
bulk of the lost blood is in
a diluted state replaced by
watery serum absorbed from
various sources. And thus
the blood is in a diluted state.
The mode in which a wa=
tery blood tends to produce
dropsy, is not merely by the
greater proneness of thin ves=
sels fluids to transude through
the walls of the vessels, but
also by the failing and ir=
regular distribution of the
force of circulation. The
structure of the heart, its
valves and vessels are adapt=
ed to certain degrees of

Spissitude
and quantity of blood — and
when these vary much from
the natural standard,
when the blood instead of
being of an unctious fluidity
is watery, the hydraulic and
moving apparatus of the
heart and vessels is less
capable of effecting its
propulsion. And this con-
dition of the blood may
not only thus facilitate
watery effusions but pro-
mote the congestions and
other imperfections in the
circulation with which
dropsy is connected.

That there is an al-
teration in the blood of those
labouring under Malarious
fevers sufficient to produce

dropsy is made clear by comparing the analyses of the blood in such cases, with healthy blood. Which owing to the kindness of Dr Charles Spick we are able to do.

Healthy Blood.		Intermittent fever
Water in 1000 grs	791.1 —	852.353
Fibrin	2.2 —	3.357
Globules	137.2 —	69.772
Solids of serum	70.5 —	74.518
Iron. perox.	0.584 —	0.345
Phos. acid	0.221 —	0.245
Chlo. sodae et potass.	3.500 —	6.096
Phos. Sodae	0.625 —	1.261

Here then we find that there is a considerable alteration of the constituents of the bloods — the water and the salts are

considerably increased, whilst the red globules are greatly diminished - only about half that of health.

This with what we have said before leaves no room to doubt but that this change is sufficient to produce dropsy.

This unhealthy condition of the blood may be very easily restored to its healthy standard if properly treated.

But the misfortune is - particularly in the cases that I have seen, they go out from under medical treatment too soon - almost as soon as the chill has missed one day - certainly with considerable alteration in the blood, and even thus partially cured, if

care is taken with reference to diet and they avoid all malarious districts. they may get well, but such is seldom the case, they go immediately back to the same mode of living, and even to the same malarious district. It is no wonder then that they should not get well – it is no wonder that we have dropsies supervening in all such cases, as we certainly do.

Below is the analysis of the blood of a man with acute dropsy following after an attack of Remittent fever, the chills of whom were cured by the use of the Sulphate of quinine.

Acute Dropsy.

Solids in 1000 grs —	158.730
Water — — —	841.270
Fibrin — —	2.385
Globules — —	53.834
Solids of serum —	92.507
Iron. Peroxi — —	0.346
Phos. acid — —	0.201
Chl. sodas et potass —	2.340
Phos. sodas — — —	0.680

This shows a marked alteration for the worse, not only between this and healthy blood — but between this and the case of Intermittent given above. The amount of red globules in health as 137.2 — in the intermittent case 69.772 — that of the dropsy — 53.834 so much for the cause.

We not
unfrequently meet with
cases of dropsy difficult to
diagnose. But their peculiar
pale withered look – increase
of bulk beyond what is natural
– the evidence of an effusion being there – derangement
of the system in general – secretion of urine very scanty – costiveness – want of appetite, together with the history of the case
is generally sufficient to
make it a case of dropsy.

If a person presents this
appearance having previously
had intermittent or remittent fevers – ninety-nine chances
to one the dropsy is dependant
upon them – this is further confirmed when by means of auscultation and percussion we find

nothing sufficient in the heart or lungs to cause it.

If it depended upon inflamation of the kidneys we should have albumenuria.

That albumenuria is not sometimes produced by malarious fevers we think is by no means certain, for out of eleven cases that I have seen at the Alms House, nine of them previously had intermittent or remittent fever, never have had this albumenuria previously.

Dropsy dependant upon obstruction of the liver, is confined to the abdomen generally, but owing in part to gravitation and part to pressure upon the ascending cava by the engorged liver we have

oedema of the lower extremities appearing. This appears sufficient proof of the difference between it and that depending upon Malarious fever - in the latter the effusion makes its appearance in the lower extremities first.

Dropsies in the abdomen are the most difficult to diagnose - they are so apt to be confounded with pregnancy - ovarian dropsy - tumors and so on.

The tests for pregnancy are sufficient to show whether it is dependant upon them or not.

We can distinguish it from ovarian dropsy by the sounds given out on percussion. If we find in a case supposed to have dropsy ascites, the

dullness changing according to position - the dullness always being in the most dependant part, we may safely put it down as such - but if on percussion and change of position, we find that the dullness is stationary, it cannot be ascites - further if not ascites we will find more or less bulging on the side of the dullness.

The Prognosis of Myalarian dropsy is not generally very grave, particularly if we are called to it early, but otherwise it not unfrequently baffles all attempts at cure - thus making the treatment of some moment.

The Treatment used

The Treatment used at present are not many in fact we may say that they are but two. That which aims at relief without any reference to cause. And that in which the treatment is directed to the removal of the cause.

In the former are used all varieties of diuretics according as they may please the fancy of the practitioner — most of whom have their particular hobbies. This treatment owing to its tendency to relieve congestion of the kidneys, and to increase the secretion, is often of marked use — particularly if in addition to these, we add some mild ~~diuretic~~ diaphoretic and purgative, thus exciting other secretions

to increased action.

Blood-letting both general is frequently used in this disease, but we think erroneously it may answer in other varieties of dropsy, but certainly not here where the circulation is laboring for want of its natural stimulus — and will blood letting increase the natural stimulus? Will it not on the contrary diminish it, by relieving the blood of some little that it may possess? If this be so, bearing in mind the cause of this form of dropsy, do we not rather retard than advance the cure?

Quinine in Malarious fevers, is universally acknowledged as a specific never failing to effect a cure. Now if there is still any malaria

in the system of those labouring under this disease, about which we have not the slightest doubt, is certainly must be productive of more or less good effect, and when we remove this, which we can by the administration of the sulphate of quinine, we have relieved the system of the original cause of the dropsy.

But the great alteration of the blood is the immediate cause of the dropsy — the great diminution of red globules, this being the case, the call for iron in some form or other is loudly demanded, and almost any form of it may do, but the one principally used is the

Sulphate. As these two medicines the sulphate of quinine and the sulphate of iron, do not interfere with each other in their actions, they may conveniently be given together, and the best way of doing it is by giving them in solution, as they both are soluble in water, mixing in the proportion wished to be given. The dose that is frequently given is of the iron gj and quinine grs - three times daily.

I have seen almost every variety of treatment that is used tried, some of them successfully, but none of them are near so speedy or effectual as that of quinine and iron.

While all the other treatments fail to cure as a general thing in less than three months - we have never seen a case of malarian dropsy last more than one month at farthest on this plan, and I remember several cases of large effusions clear up in less than two weeks, on this gum & iron treatment.)

There is in addition to the regularly mentioned others, though of much less importance.

The Liver and Spleen are almost always more or less congested hypertrophied, owing to long congestion, so much so they may often very readily perceived and felt distending the,

abdomen.
They mostly disappear under the treatment for dropsy, but the ointments of Iodine and mercury, will always be found a good adjuvant, it must be rubbed over the congested organs. But all treatments sometimes fail, the parts remaining chronically enlarged.
They rarely however interfere with the patient except by their size and weight, which sometimes causes a little uneasiness to the parts in connection.
It is a fact universally noticed that persons living in these Malarious districts, however well they may escape the chills and fevers, do not remain

unharmed by the Malaria - they become small of stature - sickly looking and always have an elderly wrinkled appearance.

The only possible way to avoid this is to leave the unhealthy district and go to a healthy one, and then recieve the treatment for Malaria.

Ethm—

An
Inaugural Dissertation
on
Pneumonia
Submitted to the Examination
of the
Provost, Regents & Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
by Edmond B. Marmillion
of Louisiana

Previous to the publication of Laennec's incomparable work on auscultation and percussion, diseases of the respiratory organs could scarcely said to be well understood; and inflammations of the lung used to be described as often under the name of pleurisy as under that of pneumonia. Laennec has made a nicer distinction betwixt the two diseases, and has given the name of pneumonia, to inflammations of the parenchymal of the lungs.

Pneumonia is one of the severest and most common diseases; and in cold and temperate climates, is productive of more deaths than any other acute inflammations.

The most common cause is longer posture of the body to a low temperature. — Next to cold, tubercles in the lungs may be considered as the most common cause. They may excite inflammations, either by their irritating influence, or when they

are in large number, by mechanically obstructing the circulation, and giving rise to congestion; and from the important link which congestion of blood in the lungs forms in the development of inflammation, pneumonia must necessarily be the result.

In some parts of Denmark, Russia, and in the neighbourhood of Mount Vesuvius, pneumonia assumes an endemic character. Its occurrence under this form, is owing, according to Laennec, to deleterious miasms suspended in the air, entering the circulation and causing inflammation of the lungs, by operating upon that organ, in the same manner as the poison of the rattle snake, by producing an injurious influence on the pulmonary vessels.

Pneumonia is very common as the sequel of other diseases. It is also very

often complicated with Hooping Cough, Small Pox and Measles, and considerably increasing their danger.

Excessive exertions of the lungs by violent exercise; the inhalation of irritating vapours; Wounds of the lungs blows on the Chest, and pulmonary apoplexy, may be added to the endless list of the exciting Causes of Pneumonia.

Laennec arranges the general effects of pneumonia into three Stages, each of which is distinguished by well marked Characters. viz: The first, is that of engorgement, the second, that of hepatization, and the third, that of purulent infiltration.

These are the three common effects which inflammation in its general course, produces in the lungs.

Of abscess and gangrene, it is not

my design to speak: suffice it to say that they are of very rare occurrence, and that they ought to be viewed as exceptions rather than as regular events.

One of the best proofs which I can give of the rarity of abscess of the lungs, says Laennec, is derived from this fact, that notwithstanding the zeal with which morbid anatomy has been cultivated in France during the last twenty years, I know of only two well authenticated cases of this affection.—

During the first stage of inflammation or state of engorgement, the substance of the lung is of a dark red colour, both internally and externally, and looks precisely as if it were injected with claret wine; and on cutting it, a great quantity of frothy and reddish serum issues.

The lung is heavier than natural.

inelastic, and crepitates less under pressure than it does when it is in a natural state. It contains still a sufficient quantity of air to prevent its from sinking under water. Its vesicular texture can still be perceived, and by washing it, we may give it, its natural colour, appearance, and even its elasticity. —

This stage of inflammation is called by some writers, the stage of Splenization, on account of the great facility with which the lung is torn, resembling in this respect, the Spleen.

— Andral thought that this diminished cohesion in the substance of the lung, was a characteristic mark of distinction between inflammation and simple mechanical hyperaemia, which is most generally met with in the lungs after death. But he afterwards

abandonned this opinion, and referred the more easily lacerable state of the lung, to the physical effect of an unusual proportion of blood in it.
Chomel still maintains the former opinion of Andrall.
Dr. Williams differs from both these great authorities. From his own personal observations, he has concluded that both mechanical congestion, and inflammation tend to diminish the cohesion of the parenchyma of the lung, more than the mere increase of liquid in it can explain.
If the inflammation has not been arrested, after twenty four or forty eight hours, the lung undergoes a further alteration.
It passes into the second stage, or that of red hepatization.
It crepitates no longer under pressure, and from the fact of it containing no air.

it sinks in water.—
When we make an incision in the lung during this second period, the cut surface presents the same appearance as does the cut surface of the liver. hence, Laennec has applied to this altered lung, the term of hepatization.—
The lung is denser, and at the same time, it is more easily broken. This results from the softening of the areolar tissue which holds its constituent parts together.
Sometimes the texture of the lung is so rotten, that the slightest pressure will suffice to tear it. For this reason, Andral has propose to call this second stage of Pneumonia, red softening.
If the inflammation is still unchecked, it proceeds a step further. The march of the hepatized lung towards the third stage, is marked by its becoming lighter in colour.— From

red & it becomes of a Straw Colour. When pressed a turbid red liquid exudes from it, and very little pressure is required to crush it. — By Careful examination, we may sometimes perceive minute yellowish Specks, which are the first appearance of pus.

At first the lung retains its compactness, the change being only Confined to the Colour.

This State of inflammation has been called yellow hepatization.

On cutting into the lung, no granular texture can any longer be seen, - but a yellowish purulent matter oozes out in greater or less abundance, according to the progress which the suppuration has made. The softness of the lung becomes so great, that even the slightest pressure of the finger, readily makes a cavity, which soon fills with pus, and may easily

be mistaken for an abscess.
It is through the aid of auscultation and percussion that we obtain the best pathological process of pneumonia; and they are likewise our chief sources of diagnosis
When we apply our ear to the chest during the first stage of the inflammation, we hear the crepitant râle, which is, according to Laennec, the invariable pathognomonic sign of the first stage of pneumonia. Its extent marks that of the inflammation.
This dry crepitation is always heard, at first, mingled with vesicular murmur; but as the disease advances the crepitation becomes more and more marked, until at length, it totally supersedes the murmur.
As long as the vesicular murmur predominates over the crackling, we

are certain that the inflammation is slight, but on the contrary, if the crackling sound prevails over the natural murmur, and ultimately masks it, we may conclude that the inflammation is still increasing, and that it tends to pass from the first to the second stage. On the other hand, if the vesicular murmur predominates over the small crepitation, until at length, the latter becomes inaudible, we have an evident sign that resolution has taken place.

When the inflammation has passed in the second stage, we no longer hear the crepitant râle; but in its stead, we have the bronchial respiration, which is most distinctly heard during the forcible respiration of coughing. This bronchial respiration is more perceptible, when the

inflammation is seated in the upper lobe. This is owing to the greater size of the bronchial tubes, and of their being more numerous at the root of the lungs than elsewhere.

When the whole of one lung is hepatized, we have no bronchial respiration on account of the lung being no longer able to expand. In such cases, we have bronchophony.

The chest which was, at first, sonorous, yields a perfectly flat sound when percussed. This dulness varies greatly according to the circumstances of the case. — If ~~the~~ a portion of healthy lung should ~~have~~ intervene between the inflammed part and the chest, there will still be a certain degree of resonance; whereas, if the hepatized lung comes in contact with the walls of the chest, the sound elicited by percussion will be flat.

On the opposite side of the chest, or over the healthy parts of the inflammed lung we hear the respiration louder than natural.
From its resemblance to the respiration of children, it has been called by Laennec, the puerile respiration.
By palpation, we likewise obtain some very important signs. If we apply our hand to the chest, and bid the patient to count, we will perceive that the thrill on the inflammed side, is greatly increased.
This stage of pneumonia, is a state of great anxiety to the physician as well as to the patient. — It is impossible to tell whether the lung will revert to its natural state, or whether the inflammation will pass to the third stage, that of purulent infiltration.
If resolution is about to take place, we will hear mingled with the bronchial respiration a slight crepitation, which, at first, is only heard at the end of each act of inspiration. —

It gradually increases in extent and intensity, whilst the bronchial respiration becomes less distinct, until it has altogether disappeared. By degree the vesicular murmur is heard mingled with the crepitation until at length it has superseded it, and the lungs restored to its natural state.

On the contrary, if the inflammation passes into the state of suppuration, in addition to the dulness on percussion, we sometimes hear at the root of the lung, a coarse mucous rhonchus. — This, at first, is the only physical sign we have; but as soon as the suppuration becomes comple, we have expectoration of pus.

When the pus has been collected in one spot of the lung, and afterwards expectorated, we have a gurgling sound, cavernous rhonchus, and pectoriloquy.

Such are the physical signs observed in an uncomplicated pneumonia. —

Pneumonia is double when it affects both lungs at once, and single when one lung only is inflammed. It is also either general or partial, according as it affects the whole or part of one lung.
Both lungs are not indifferently affected with pneumonia; but observation has proved that this disease is twice more common on the right side than it is on the left.
Andral says that out of two hundred and four cases of well marked pneumonia, the right lung was affected in one hundred and twenty one, the left lung in fifty eight, and both lungs in twenty five.
According to Laennec's statement, pneumonia occupies most generally the lower part of the lungs; and when the disease involves the whole of one or both lungs, it is almost always in the inferior part that it

first commences.
Sometimes the inflammation extends to the pleura, and gives rise to pleuro-pneumonia.
Bronchitis is always present; and in lobular pneumonia, it has been observed that only the air tubes of the inflammed lobes were affected.
Having given a short and somewhat rough sketch of the Etiology, pathology, and physical signs of this disease, I shall now proceed to give the general symptoms as they show themselves in the different stages.
The commencement of the inflammation is marked by a chill more or less violent it is afterwards followed by heat and increased frequency of the pulse. The patient's face is flushed, especially on the side corresponding to the inflammed lung. He complains of a dull and deep seated

pain, with cough and constant dyspnoea.
The cough, at the outset of the disease is of no great importance, being always dry; but after a few hours, it is accompanied by a profuse expectoration, which is of a peculiar kind, and characteristic of pneumonia.
This expectoration is frequently so viscid, that the vessel in which it is contained may be inverted without its falling out.
Its colour is various, but most frequently that of the rust of Iron.
The dyspnoea is of a great interest to the physician, as it is most generally in proportion to the extent of the inflammation. It is sometimes the only complaint of the patient.— Nevertheless we should not altogether rely upon this symptom, to judge of the extent and intensity of the inflammation. In some patients, inflammation of a small portion of the lung will embarrass

the respiration, whereas in others, a much larger portion will affect their breathing but slightly.

Pneumonia is very often confounded with acute bronchitis, and it is only by physical signs that we can distinguish it with certainty.

In bronchitis we have no crepitant rhonchus, but we have in its stead, a variety of sibilant and sonorous rhonchi.

The sputa in bronchitis is of a light colour, and very frothy; whereas in pneumonia it is of a rusty colour. It is sometimes entirely wanting, but when it does occur, there can be no doubt of the existence of pneumonia.

Pleurisy is another acute disease of the chest, which is very often mistaken for pneumonia. We distinguish it from the latter, by the acuteness of the pain, and the total want of crepitant

rhonchus.

Dulness is sometimes present from the very commencement of both diseases. In pneumonia it is fixed in the spot where the crepitant rhonchus is heard, whereas in pleurisy, it occupies the most dependent part of the chest, and may be made to change its position. We have also in pleurisy, egophony, which when perfect, is another very distinctive sign.

The prognosis of pneumonia depends altogether upon the symptoms which indicate the extent, march and complication of the inflammation. Inflammations attacking the superior lobes of the lungs, are more fatal than those confined to the lower lobes. The complication of pneumonia with other affections, increases the danger of case. Thus pulmonary inflammation

Supervening in the course of fever, is generally of a serious nature.

The dyspnoea and cough add a great deal to the prognosis.

A severe and constant dyspnoea, increasing and unyielding to treatment, gives a just and serious alarm.

The pulse when very weak and above one hundred and twenty and intermitting, augurs a very unfavorable termination.

The character of the expectoration is one of the most valuable indices of the estimation of the danger of the case.

In simple Pneumonia, the viscidity and colour of the sputa are in proportion to the intensity of the inflammation.

If it increases are in quantity and

diminishes in tenacity and colour, we may be certain that resolution is taking place.

On the contrary, if the expectoration becomes scanty or disappears altogether; and the other signs prove the existence of a considerable inflammation, our prognosis becomes unfavourable.

The age of the patient adds greatly to our prognosis. — This inflammation is very dangerous at the extremes of life; more particularly in weakly children and in cachectic old people.

In the treatment of Pneumonia, bloodletting holds certainly the first ranks amongst the remedies. From the time of Hippocrates and Celsus to this present day, the majority of medical men have

regarded pneumonia as one of the inflammations in which bloodletting is productive of the most striking benefit.
Bouillaud who bleeds copiously and coup sur coup, claims for his ~~xxxxxxxxx~~ method a very great degree of success.
There is a great diversity of opinion as to the extent to which blood letting ought to be carried. As for myself, I believe that a full bleeding carried to incipient syncope during the very first stage of the inflammation, is ~~xxxxxxxxx~~ highly more beneficial than repeated small ones.
During the second stage, bloodletting looses that efficacy which entitles it to the foremost place in the first stage of pulmonary inflammation.

Local blood letting is used by many Physicians during the state of hepatization, in order to relieve the dyspnoea and pain. It is also used in children and in aged and exhausted subjects.

Next to blood letting, Tartar Emetic is undoubtedly the most powerful remedy that we can employ. It acts both by its contro stimulant effects and by producing a gentle diaphoresis.

Calomel and opium are recommended by some very high authorities; but like Tartar Emetic, they are to be considered as measures secondary to blood letting.

Counter irritants, expectorants, evacuants, and stimulants are sometimes resorted to, according to the symptoms of the case, and always with very good result.

An
Inaugural Dissertation
On
Abortion
Submitted to the examination
of the
Provost Regents & Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
By
William Reindollar

The subject of abortion is one which I conceive to be of more importance than is usually attached to it, and therefore ought to be well understood by every practitioner of Medicine; as inconceivable injury to many a mother, and the loss many a child may result from ignorance in this matter

In the remarks which I have to make upon this subject I would not attempt to offer anything but what has just as already been written by different authors; as it is well known that I cannot say anything from practical experience.

It is well known that the usual period of utero-gestation is nine months; but it may, and frequently does occur that the foetus is expelled before that time. If the expulsion takes place within three months of the natural time, the woman is said to have a premature labour.

If before that time she is said to miscarry, or to have an abortion. The process of abortion, or labour consists of two parts, ~~that~~ that of detachment, and that of expulsion; which do not always bear a uniform relation to each other. The first part of the process (viz) detachment is productive of hemorrhage; the second of pain; the former is attended with rupture of the vessels, the latter with contraction of the muscular fibres. Hemorrhage may exist without contraction, but contraction is always attended by, and increases the hemorrhage. The symptoms must be those produced by the separation of the Ovum, and the contraction of the uterus. The symptoms mentioned are essential, but there are others that are accidental, and which vary according to the constitution of the patient, and the circumstances connected with the case. The ovum may be thrown off at different stages of its growth; which will produce

symptoms varying according to the time at which it occurs. When the process of gestation is checked at a very early period, (for instance when the decidua only is formed), there will be a great flow of blood which coagulates, or forms clots. Women who are plethoric sometimes suffer considerably from the profusion of the discharge, but in general soon recover.

Abortion may be divided into accidental, and habitual. The exciting causes of the first are very numerous, and may be easily detected; these giving rise to the second, are sometimes more obscure, and without great attention, and care the woman will go on to miscarry in every instance until sterility; or some fatal disease is caused. In many cases there can be no predisposing cause: as for instance, when it is produced by blows, falls, rupture of the membranes, or accidental separation of the decidua: but when it occurs without any perceptible exciting cause it is

reasonable to suppose that there has been some predisposing cause, however obscure it may be. An incapability of the uterus to perform its function properly may originate, from age, from former miscarriages, or in many other ways. It is well known that women can bear children only until a certain age; after which time the uterus is no longer capable of performing its function, or it can perform it, but imperfectly. It is observable that this imperfection takes place lower in those who are advanced in age before they bear children, than in those who perform this function earlier. For instance a woman who marries at forty is more apt to miscarry than an other marrying at twenty, or an earlier period. It not unfrequently occurs also, that women will go on to bear children well for many successive times, and end with an abortion.

One abortion paves the way for another, and independant of ~~of~~ other circumstances

it gives the uterus a tendency to stop its action of gestation at an earlier period after conception, and therefore it is difficult to make the woman go on to the full period after she has miscarried several times. The renewal, and augmentation of those causes which formerly produced abortion may in many cases be the cause of a repetition. But it may be caused by habit alone, or that tendency which a part has to repeat, or continue, that which it has frequently performed. With regard to the uterus there are remarkable instances on record, in which women have miscarried at a certain time; for instance at the third month. Now it must be evident that in those cases if very slight causes are applied at this particular time, they will produce abortion. For instance the excessive, or indiscriminate use of venery will destroy the powers of the organs of generation, and particularly at this time will it have this

effect. Disease or some slight change of structure of the uterus; may influence its action, and interfere with the process of gestation, and produce premature expulsion. If however the part affected be very small, and near the os uteri, by particular care, and attention the woman may be made go on to the full time: but I suppose that the change of structure must be very small, and that it requires very particular care to accomplish our end, and if it does go on to the proper time, the labour is generally very tedious. General weakness of the system, which must affect the uterus together with the other parts of the system; is also very common cause of abortion. Both a general weakness of the system, and a local weakness of the uterus may exist together, and the constitution be delicate, but the uterus may be weaker in proportion than the other organs, and consequently an abortion occurs

In a case of this kind it cannot perform its function with the necessary activity, and perfection, but is very apt to yield after a time. Abortion may also arise from rigidity of the uterus, which prevents distention. A want of nervous energy in the uterus may cause it in some instances. As the action is increased during pregnancy, it will require more nervous energy; but the size of the nerves of the uterus is not increased in proportion to the action; there must therefore be an increased supply in the trunks, or larger portion of the nervous substance, from which they arise; for it is evident that the amount of energy expended in an organ, does not depend upon the size of the nerve in the substance, but in the trunk which supplies it. Whenever action is increased in an organ it must either persist, or the larger trunk ~~to~~ of the nerve send its branches more energy; for the branches themselves are only intended for expending it.

It follows therefore, that in pregnancy there must be more energy sent to the uterus, and left to some other part. This is the case, with the organs whose action is increased; other parts are deprived in proportion as they are supplied: except when irritation raises the general action above the natural degree. As there is increased action of the uterus, which requires increased support, we find that the system is put into an artificial state, and obliged either to form more energy; (which cannot easily be done, or spend less in some other part. For instance the function of nutrition, or the action by which organic matter is deposited in place of that which is absorbed; often yields, or is lessened, and the person becomes emaciated, or the bowels producing costiness, and inflation. If no part give way, and no more energy than usual be formed gestation cannot go on, or if it does, it does, it very imperfectly

Hence some women have abortion induced by being too vigorous. What I mean by this is, that all the other organs persist in keeping up their action in a perfect, and complete degree.
The existence of plethora is a very frequent cause of abortion, and demands particular attention. This is more especially the case in young and vigorous persons, or in those who live luxuriously, and sleep on soft, and warm beds.
The uterus is consequently, too easily supplied with blood, and the increase is not made in regular degree corresponding to the gradual increase of action, and augmentation of the size; but it is as if were forced upon the uterus; which is thus made for a time to act too strongly, and vigorously. This action is sometimes so great, that it causes considerable inconvenience; such as, weight in the region of the uterus,

and shooting pains about the pelvis; but in others the vessels suddenly give way without previous warning, and the blood bursts forth from the os uteri.
I have now mentioned a number of causes, that may act upon the uterus, and thereby cause abortion; though some of them are in some instances obscure; but there are others, some of which are more perceptible. For instance, violence such as falls, blows, and much fatigue which may injure the child, and destroy part of the ovum. If part of the ovum is ~~destroyed~~ detached we may expect discharge of blood. The uterus also ~~also~~ at that time suffers in its action, and be influenced so much, that the action of gestation will be suspended entirely.
The time required for those causes to have such effects is various, and opportunity is often afforded to prevent the mischief from spreading to any great extent.
Another cause is violent exercise, such as

dancing, or much walking, or over exertion in any way; more particularly in the early months of gestation; by which the circulation is affected, so as to produce rupture, or injury in some other way.
Fatigue may act in another, and somewhat peculiar manner, and that is by taking action, and energy from the uterus: for the more energy there is expended on the muscles of the lower extremities, the less is there for the uterus; and from this abortion may occur at a very early period.
An other cause is ~~any cause~~ is any strong passion of the mind. The influence of fear, joy, and other emotion, on the nervous system is very great and the uterus is not exempt from their power; any sudden shock, even of the body in whatever way it may be caused, has great influence on this organ. There are particular Medicines, or acrid substances, that will have this effect.

Such medicines, as exert a violent action on the stomach, and bowels, will frequently excite abortion; hence emetics, strong purges, diuretics, or a full course of Calomel. must not be exhibited during pregnancy. If any part with which the uterus sympathizes has it, greatly irritated during pregnancy, the uterus may suffer, and miscarriage be produced. Hence the accession of morbid action in any important organ, or on a large extent of cutaneous surface may bring on abortion, In this way small pox often acts, whilst the same degree of fever unaccompanied by inflammation or rupture would not have such an effect. Mechanical irritation of the os uteri or attempts to dilate it prematurely, is also apt to bring on muscular contraction; though the effect of such irritation is generally confined to the spot on which it acts: it for some time only produces a partial affection of the fibres in the

vicinity of the os uteri, which causes slight uneasiness, at the lower part of the belly; generally with a tendancy to distentation. This state of things may be obviated, or prevented from extending any farther, by rest, anodynes, and the immediate recourse to such things, as the nature of the irritation may seem to require. The irritation of prolapsus ani, or of inflamed piles, with much sanguineous discharge may excite the uterus to contract, and thereby if the bleeding be profuse, and the woman weak, it demands particular attention

Having now gone through with many of the causes; we will point out some of the symptoms, which originate from these different causes. There is a great diversity with regard to the symptoms, and duration. There is frequently for some time before the commencement of abortion, pain, and irregular action in the neighbouring parts, which give ~~the~~ warning of its approach, before either discharge, or contraction take place

unless it should proceed from violence; in which case the discharge instantly appears. In some cases shooting pains and tension are felt in the heart before abortion, and the patient is faint. This is accompanied with marks of uterine irritation; such as pain in the back, and loins, frequently a spasmodic state of the bowels, and sometimes a slight febrile state of the system. When the membranes come to occupy more of the uterus, there is bearing down pains with irregularity in the attack; there is generally a more rapid discharge, owing to the greater size of the vessels; but it does not follow, as a necessary consequence, that there is more blood lost, that at an earlier period, for coagula form readily from slight fits of faintness, and other causes. In conclusion of my remarks upon this part of the subject I would say say that the fœtus abortion is advanced beyond the third month, and the nearer it approaches to the end

of the sixth, the less same is therefor it to be accompanied, but the greater of its being succeeded by nervous affections

Signs of the death of the child.—

The signs by which we judge that the child is dead, are sudden cessation of the morning sickness, together with any other sympathetic symptoms, that may have been present. The breasts become flaccid, and any milk that was formerly secreted generally disappears. If pregnancy have advanced beyond the period of quickening the motions of the child will not be felt, and a feeling of heaviness will be felt in the pelvis. When these signs are observed, and especially when they are followed by discharge, and if attended with pain it is pretty evident, that expulsion will take place. The child is frequently thought to be dead when it does not move, but this is not always the case. The ovum may perish at a very early period, though not be immediately

discharged; in consequence of which the sympathetic signs of pregnancy disappear, and there is usually a discharge of serous, or milky fluid from the nipples. The woman feels languid, and lost at night, a loss fits of sickness, a hysterical symptoms; at this a discharge of dark coloured fluid takes place from the vagina. This continues until the entire remains come away at which time the health, and spirits are restored.

We next come to consider the duration, and the danger there is attending this process. The duration of abortion is variable, and in many cases it will continue, but a few hours, though in a great majority two, or three days is sufficient to complete the process; there are other instances in which it is threatened for a long time, and weeks have elapsed before the expulsion has taken place.

The danger of abortion, is to be estimated by considering the previous state of the health, by attending to the violence of the discharge,

and the difficulty there may in checking it: to its duration, and the disposition to expulsion which accompanies it: to the effect which it has produced on the system, and to its combination with hysterical, or spasmodic affections. In general abortion is not considered dangerous, but in some cases it does prove fatal very speedily; either from loss of blood, or spasm of the stomach or convulsions. It is gratifying however to know that this termination is rare, that these dangerous attendants are seldom present, and that a great hemorrhage may be sustained, and still the strength soon recover. Miscarriages if frequently repeated are apt to injure the health, and break up the constitution.

Treatment. The treatment of abortion is necessarily divided into three parts; that of preventing it in those who are subject to it, in checking it when it has immediately threatened, and lastly, the proper

method of conducting the woman through it when it cannot be avoided.

The means to be employed in preventing habitual miscarriage must depend upon the cause giving rise to it: consequently it will be necessary to attend to the usual habits, and constitution of the patient. As we have stated previously that, this may arise from plethora, which is induced by a full habit. In a case of this kind it will be of advantage to confine the patient almost exclusively to a vegetable diet, with considerable and regular exercise. The sleep should be lessened, and taken not on soft, and warm beds, but on a firm mattress in order to prevent the accumulation of too much heat about the body: Attention should be paid to the bowels, which ought to be kept in a loose state, by a gentle laxative given occasionally: this plan must not however be carried too far, or we may weaken the constitution of the patient,

and thereby occasion great mischief. In addition to these means the cold bath is one of the best means, for preventing abortion, and this should be used in the morning. The shower bath may also be used, but we must be cautious in the commencement of its use, and perhaps it will be well to add a little warm water so, as not to give too great a shock. If the pulse be at any time full, or throbbing, or if the patient, be of a vigorous habit, it will be of advantage, to take a little blood at an early period Now as to the way of bleeding there is a difference of opinion, but we think it best to bleed frequently, and in small quantity which is sometimes required immediately after the suppression of the menses. Some recommend the use of digitalis, until it slightly affect the pulse, keeping it below its natural standard. For this purpose half a grain may be given three

or thrice a day. It should be continued for a few days, and omitted for a day or two, in this way it may be continued till the danger is obviated; but when the decay is beginning to produce injurious effects on the system it must be discontinued. Injecting cold water into the vagina twice or thrice a day has a good effect with the continuance of the shower bath every morning. If there is much aching pain in the back it is necessary to apply cloths to it wet with cold water, and also to apply water by means of a watering can. These together with many other means: which I do not deem expedient, or cannot here mention are the only by which abortion may be prevented in those who are subject to it. In the next place we will treat of the means of checking it when it is threatened; though when once threatened, it is very apt to go on to completion, and it is

only before the expulsive efforts have begun, that, it can be checked; for whenever muscular contraction is universally set up, it can very seldom be checked.
There is a great deal depending upon the time when the physician is called, whether he can check the process, or not. If he be applied to upon the first unusual feeling, he can in many prevent further mischief. The cases of threatened abortion in which we most frequently succeed, are those arising from slight accidents; such, as a slipping of the foot, or from other causes exciting a slight over action of the vessels: because in of this kind, the hemorrhage immediately gives alarm, and the physician is called before the action of gestation is much affected.
When abortion is threatened we are to employ means by which it may be stopt. The taking a little blood if the pulse be

full, and frequent, or if the patient be not of a habit forbidding depletion: to which may be added a full close of opium, and a state of rest in a recumbent posture; and, as we stated previously with but few cloths, and a cool apartment. The quantity of food taken should be small, and of a weak nature. We should remove all uneasiness, in whatever way it may present itself, and prevent every part from continuing in a state of undue action. When a slight discharge takes place, from an accident, we may derive advantage from an injection of a solution of alum, if the discharge be not considerable, but if it is we are likely to fail, and it will be better to resort to other means. If in a plethoric habit abortion is threatened from a fright, or from mental agitation: there is palpitation, rapidity of the pulse, headache, flushed face, and pain in the

lower part of the belly; blood-letting relieves the uneasiness, in the head, and the pains; afterwards, an anodyne may be of service.

When abortion cannot be prevented, what we have to do, is to conduct the patient safely through the process; which is done by lessening the effects produced by the separation of the ovum and increasing the contraction. The first thing which naturally claims our attention is hemorrhage, and the best method for checking it. It is a practice among some to bleed, as a general rule; this will do to prevent miscarriage, but it cannot succeed if contraction have unnecessarily commenced, nor the discharge cannot be moderated by venesection, unless in cases of undue, or strong action, or where there is much blood in the system. The fulness and force of the pulse are lost much sooner than may at first be supposed

from the mere loss of blood. This has been attributed to an affection of the stomach. When abortion has proceeded so far, as to have induced the pulse small, and feeble; bleeding cannot do any good. Instead of this it is better to use some other means to lessen the circulation and in many cases the digitalis will be of service; though when there is any affection of the stomach it is inadmissible. The application of cloths wet with cold water to the back, and external parts will have a beneficial effect, and ought to be had recourse to. The introduction of a small piece of ice into the vagina has often the effect of stopping the hemorrhage; and the manner in which it is to be applied is, first to wrap it in a smothe piece of linen: this however should not be continued too long, or it may prove injurious to the patient.

When all other means fail of abating the hemorrhage, stopping the vagina with a plug will generally succeed. This may be done by taking a piece of cloth, and dipping it into oil, after which it is to be introduced gradually with the fingers. The manner in which this acts, is by giving time for the effused blood to coagulate.

If we do not think proper to use the plug astringent injections may be substituted in their place; and the solutions of alum, or acetate of lead, are among the best of these. Opiates are used by many in every case of abortion. But as the process cannot go on without muscular contraction, and, as they tend to suspend it, they ought not to be used, but with caution. They are useful in cases of threatened abortion: more especially in cases of accidental separation of the

membranes, and the consequent discharge in weak, and emaciated habits if given early they are of service. They are useful in allaying those nervous affections which precede, or accompany abortion; but if the pains be going on regular they only interfere, and prolong it. If the membranes have given way, and the foetus is still retained, we must endeavour to extract it, this may be done by insinuating the fingers cautiously within the uterus, and hooking it out.

There are other cases, and very troublesome ones they are, in which the foetus has been expelled, while the secundines remain: The patient is never secure until they are thrown off. The uterus does in a majority of instances, contract, and expel them, within a few hours. When a part of the foetus, or some of the secundines

are left within the uterus; dangerous consequences arise, for within a few days putrefaction takes place, and much irritation is given to the system until the foetid substance is expelled. It may happen that there is a part of the placenta retained which is but small, and it may continue to come away for some time during which time the woman is languid, hysterical, and subject to irregularity But the symptoms are generally more active; there is loss of appetite, prostration of strength, and a host of other symptoms.

We see from what has been said the impropriety of allowing the secundines to remain to long, and on the other hand, the danger of being to rash in taking them away.

An

Inaugural dissertation,

on

Intermittent Fever,

submitted for examination,

to the

Provost, Regent, and Faculty of Physic,

of the

University of Maryland,

for the

degree of doctor of medicine,

by

C. M. D. Marcy.

In the whole catalogue of diseases, few can be found, which present a more remarkable assemblage of phenomena, or those of greater interest, than that form of fever called Intermittent Fever; and upon few, has there been more theorising and speculation, more "learned dust kicked up", to account for its various phenomena. And though, we may be said to be almost entirely ignorant, of the precise manner of its production, and of the "modus operandi" of the medicines employed in its treatment, yet there is scarce any disease, which we are able to treat more successfully than this.

Having no definite seat in the system, it is known to us only, by its group of symptoms. These occur with a remarkable degree of uniformity, in almost every case, following each other, in the same order, first a chill, then a fever, and terminating with a copious perspiration. And hence, it has been divided into three stages, the cold, the hot and the sweating stages; each having its own appropriate phenomena.

During the cold stage, we find the patient complaining, at first, of listlessness and languor, attended with a frequent desire to yawn and stretch himself; of a dull, heavy pain in his limbs, which he describes as an aching of his bones. At this time, the ends of his fingers and toes and the extremity of his nose, become cold. Soon he feels a sensation of chilliness, along his spine, which goes on to increase, until his whole frame

shakes, as if exposed to Alpine frosts. Nor can this sensation of chilliness be overcome, by any degree of artificial heat, or by any amount of clothing. His lips, the tips of his ears and nose, and the ends of his fingers and toes present a blue and livid appearance. He is pale, and the surface of his whole body is dry and rough, presenting that appearance called "cutis anserina", in consequence of the blood having deserted the superficial capillaries. His limbs diminish in size, in short, he looks and acts, very much, like one, who is exposed to a severe degree of cold. He loses his appetite, from the first onset of the disease, and even loathes the sight of food. His pulse is increased in frequency, and his respiration is quick and anxious. His secretions are diminished, his bowels confined, and his tongue dry and white.

This condition of things having lasted for a length of time, an entirely new order succeeds. Flushes of heat begin to be felt, at first, about the face and neck, and gradually extending over the whole body. The sensation of cold ceases entirely, and the shrunken features and skin recover their natural size and appearance. The respiration and pulse become more normal. Reaction takes place, but it stops not at the healthy standard. The face becomes flushed, and the arterial system is highly excited. The natural temperature of the body is considerably

increased, and he, who, but a short time before, was shivering with cold, and seeking artificial warmth, now feels, as if the fire had enter=ed his very vitals, and was consuming him. His head aches almost intolerably, his breathing is deep, and his urine scanty, but highly colored.

But this state of things is not a permanent one. After a time, the violence of his fever abates, and a slight degree of moisture makes its appearance, about his forehead, which soon increases to a profuse perspiration, gradually extending itself over the whole surface of the body. All his uncomfortable sen=sations, at length, disappear, and the sufferer feels himself restored to a comparative degree of health. His appetite being in some measure regained, he may perhaps flatter himself, that he is rid of his troublesome visiter, but it will be sure to return upon him, after a certain time, and will continue to recur, at regular intervals, with a singular exactness, unless the proper remedies are exhibited, or the patient removed, from the supposed exciting cause of the disease.

The interval, which elapses, between the commencement of one paroxism of the disease, and that of another, though for the most part, of a given length of time, during the same

attack, yet in different individuals, or in the same individual, at different times, it varies, giving rise to a division of the dis=ease, according to the length of this period, into Quotidian, Tertian and Quartan. The interval, of the Quotidian type, is 24 hours, while that, of the Tertian form, is 48, and that, of the Quartan, 72 hours. These are the varieties, of the disease, most frequently met with, and though others are spoken of by authors, yet they are probably, but some modification of these, appearing, as they do, under numerous forms. Thus we have what are called double Tertians, and double and Triple Quartans &c.

There is not only a variation in the length of the intervals, peculiar to each form of the disease, but each has also a certain length of time, peculiar to its paroxisms. Thus that, of the Quotidian type, continues about 10 or 12 hours, and that, of the Tertian, about 6 or 8 hours, while that, of the Quartan, lasts only about 4 or 6 hours. The Quotidian, having the longest paroxism, is found to have the shortest cold stage, and the Quartan, having the shortest paroxism, has the longest cold stage.

Though as a general rule, the paroxisms, of the different types, of the

disease, return regularly, at a certain hour, yet they will be found sometimes to anticipate their usual hour of approach, and at others to postpone it; the latter of which, when it occurs, is regarded as a favorable sign, in regard to the termination of the disease, and the former an unfa=vorable one. Sometimes too, the disease, in its progress, changes its type, the Quotidian becoming a Tertian, and the Tertian a Quartan, and "vice versa".

Occasionally it happens, that the paroxisms are imperfect, being shorn of one, or more of their stages, or having them so slightly marked, as to escape the notice of the patient. And sometimes they are complicated with other affections, which do not properly belong to them. Thus we have at times, during a paroxism, the occurrence of delirium, convulsions, and it is said, sometimes even of syncope, and of Tetanic symptoms.

This disease makes its attacks, at all seasons of the year, but it is found to be most common, during the spring and fall months. Of these, the fall intermittents are considered as the most severe. The Quotidian type, as a general rule, is said to be the most common in the

spring, and the Tertian in the fall, while the Quartan is common to both fall and spring: but to this rule, (if indeed there be such a one) there are, at least, numerous exceptions.

Persons of all ages are subject to this disease, though the very young and the very old are less frequently attacked, than those in middle life, in consequence probably of being less exposed to its exciting cause. and for the same reason, also, women are less subject to it than men.

Having thus taken a hasty view, of the phenomena, of Intermittent fever, let us, for a moment, notice, what is known of its causes. It, in common with other diseases, has its predisposing and exciting causes. As predisposing causes, may be enumerated, both general debility and every thing that tends to produce this state, in the system. They, whose systems are in a full state of vigor, may be exposed to its exciting cause, without contracting the disease, and yet these same persons, when worn down by fatigue, whether from mental or physical exertion, or weakened in any other way, will readily contract it, from an equal exposure.— One of the most powerful of its predisposing causes, arises from the

actual occurrence of the disease. He, who has had an attack of the ague, in such a state does it leave his system, is much more easily affected by its exciting cause, than he, who has had no attack. So powerfully does this predispos=ing cause act, that the chills have frequently been known to recur, even after the patient has been removed, from the influence, of the exciting cause, in consequence of exposures, which, in other conditions of the system, would have had no effect at all, or would have given rise to an entire=ly different disease. And a very curious fact has been noticed, in many instances of this kind, in rec=gard to the recurrence of the disease, that it frequently makes its appearance, on that day, upon which, it would have done, if the disease had not been interrupted.

It has been supposed, that there is but one exciting cause, of this form, of fever, that is, there is but one primarily concerned, in its production, to which, if a person is never exposed, he never can have Intermittent fever. Whether this be so, or not, certain it is, that there exists, in particular situations, some=thing, to which this disease owes its origin, and this something has been called, Marsh Miasmata, Malaria &c.

Of what this malaria consists, we are entirely ignorant. Hitherto it has eluded the closest scrutiny, evading the powers which, modern science has conferred upon the Chemist. It is supposed to exist, in the air, and accordingly, numerous analyses of air, taken from infec=ted districts, have been made, by the most able chem=ists, but nothing, peculiar, has been discovered, in its constituents. And on this account, some laugh at the idea, of its supposed existence. But though we are unable to discover its precise chemical qualities, yet from its effects, we are perfectly certain, that some cause exists, and that in places, possessing particular charac=teristics, and why not as well call it Malaria, as any thing else, as it serves sufficiently well to hide our igno=rance. But, although ~~we~~ are ignorant of its particular nature, yet by close observation, some little has been ascertained, in regard to its "qualities, habitats and habits."

"For ages, it has been observed, that the inhabitants, of wet and marshy districts, are particularly obnoxious to its subtile influence, and hence it was formerly supposed, that decaying vegetable matter was essen=tially necessary, to its production, but it is now thought

that this is not absolutely necessary to produce it, though it may, in some measure, assist. Its effects are not felt within the Arctic circle, nor is its influence manifested, during the winter months, in temperate climates: But the nearer we approach the equator, the more virulent are its powers, and hence it is inferred, that a high degree of temperature is necessary to its production. Moisture and Earth are also necessary. Of it, Dr Watson says, "that it is most noxious at night; that it lies, naturally, near the ground; that it is capable of being carried along, by currents of air; that for some reason or other, it cannot pass across water; that it attaches itself to trees; that it is diminished by cultivation, &c, which facts are of considerable importance, to enable us to escape its pernicious influence. A remarkable fact, in regard to it, is that, in the same region of country, in one part, its effects will be very manifest, while a contiguous part is entirely exempt from them, an instance, of this, occurs, at Cape May. Here, during the spring and fall months, and particularly the latter, ague and fever is our most common disease, among those who live upon the main land, while

among the inhabitants, of Cape Island, the disease never occurs, except in those, who, in their daily pursuits, are employed, upon the main land. Now, how can this be accounted for? The Island is seperated, from the main land, by a tract of salt marsh, about 1/4 of a mile in width, and by a stream of salt water, some 15 or 20 feet in width. I know of no way of accounting for this exemption, if it arise not from the fact, that the prevailing direction of the winds, at that particular season of the year, when the disease is most prevalent, (the fall) is from the South East and South West, and as the coast, at this place, runs nearly due East and West, the poison cannot be carried by the winds to the Island, and its own soil not being adapted to the generation of the malaria, the inhabitants escape its pernicious influence.

Now by what mode of action is it, that the malaria produces its effects, or in other words, gives rise to that remarkable assemblage of phenomena, which we witnes during a paroxism of Intermittent fever. Various theories have been advanced, to account for its "modus operandi," but we are probably no better able to explain it, now,

than those, who lived years ago. We can speculate, and form as many hypothetical theories, as we please, yet we can prove nothing. As it seems to us, it is probable, that the Malaria produces a sedative effect, upon the system, and acting upon the superficial extremeties, of the nervous system, more particularly, upon that part of it, whose special office it is, to preside over and maintain the circulation, through the superficial capillaries, its function is interrupted, and the circulation through these vessels is disturbed. The blood no longer readily flowing through the capillaries of the surface of the body, is determined to the internal organs, producing congestion, which would probably continue to increase, until a fatal result would follow, were it not, that by the efforts of nature, a reaction is established, and the circulation restored through the superficial vessels. To bring about this result, unusual efforts of the heart are necessary. This salutary effort, on the part of nature, to restore the circulation, to its normal standard, gives rise as we conceive, to the hot stage of the paroxism, while the sedative effects of the Malaria causes the cold stage. The sweating stage is a necessary

consequence, of the unusual exertions of the heart. And thus the paroxysm ends: but as the exciting cause is still present, as soon as the system recovers itself, from one paroxysm, the same effect is gradually produced, and another paroxysm succeeds: and thus will it continue to go on, until interrupted by medicines, or by a removal from the influence, of the exciting cause.

The length of time occupied, by the poison, in producing this effect, may be influenced by various causes, such as by the intensity of the poison, by the state of the system at the time, by peculiar idiosyncrasies, by the pursuits and mode of life of the patient, by his diet, habits &c, thus giving rise, to the different types of the disease, which we meet with.

This disease, as it occurs with us, is seldom, or never fatal, unless in broken down and debilitated constitutions, and hence the prognosis is almost always favorable. But when the poison is more virulent, it sometimes terminates fatally, even during the first paroxysm, and hence the prognosis, in such cases, will vary, according to the condition of the patient, and the

intensity of the exciting cause. In a majority of cases, as it occurs with us, if we could remove the patient, from the influence of the Malaria, the disease would cease spont=aneously. But as this, in most cases, would be inconvenient, and in many, impossible; and particularly, as we have, in this disease, a remedy, which is specific, (if there be any such thing, as a specif remedy) it becomes us to relieve our patient, of his troublesome complaint, as speedily as possible, and this leads us, to the consideration of the treatment, which has been found proper, in this disease.

The treatment, in this disease, consists of that proper during a paroxism, and that necessary, during the intermission. Little need be said of the treatment during the paroxism, as it occurs with us, as it is seldom found, of so serious a form, as to require any assistance from the physician. Nature herself will prompt the patient, what to do, in order to render himself, as comfortable as possible, and waiting with patience, until the cessation of the paroxism, when he may employ the proper remedies, to prevent its recurrence. But when the disease is more

severe, where it is apt to run into the remittent, and as some say, even the continued form of fever, it may often become necessary, to employ remedial agents, during the fit, so to modify it, as to prevent these effects. In such cases, to shorten the paroxism, physicians are in the habit of administering, during the cold stage, diluent drinks, cordials, external warmth, opium, emetics and sometimes even venesection. Opium and blood-letting are also said to be employed, with advantage, during the hot stage. But to us, the treatment necessary during the intermission, is a more important consideration. The remedies used are of two kinds, specific and general. The general remedies are employed, rather as preparatory measures, to enable the specifics to exert their full influence upon the system, and are, emetics, cathartics and sometimes bloodletting.

Emetics however have been known, when taken just before a paroxism, to prevent its occurrence, which they do, probably, by the powerful impression, they make upon the system, thus supplanting the diseased action, rather than by any direct effect, that they have upon the disease. Prof. Dies, of New Haven

recommends the application, of a ligature, upon the arm of one side, and the leg of the other, just before the accession, of the expected paroxism, saying that he had frequently, in this way, been enabled to prevent its attack. As a general rule, however, emetics and cathartics are employed, only to remove any accumulation of matters, which may happen to be contained in the first passages, which, if suffered to remain, would materially interfere with the action of the specific remedies, which we may employ.

The remedies which are, at the present time, relied upon, for the cure of this disease, are, the preparations of Bark and Arsenic. These when properly administered, will very seldom indeed fail to produce the desired effect. Previously to the discovery, of the powers of these remedies, in this disease, a great variety, of articles, was employed; indeed almost the whole of the articles, of the classes of Tonics and Astringents, as well as some of the Narcotics, Antispasmodics and Stimulants, showing by their very number, their inefficacy. But these are seldom employed now, unless it be, where the specific remedies cannot be

readily obtained, or have failed to overcome the disease.

The sulphate of Quinia is the preparation of Bark, now most generally employed, to "break the chills." The quantity given, for this purpose, varies in the practice of different physicians. Some recommend, giving it, in one large dose, just before the accession of the chill, and think, that in this way, they better obtain, the full effect of the medicine, while others prefer using it, in small and frequently repeated doses, during the intermission. Indeed this difference seems to be somewhat sectional. While the Southern and Western physicians find it expedient, to administer it, in quite large doses; at the North, the medical men are better satisfied with the effects, of the small and frequently repeated doses. Perhaps where the Malaria is more virulent, in its effects, large doses of the medicine are required. With us, it is very seldom indeed, that an intermittent fever will not yield to grs. x or xv of the Quinine, given in grs. ij doses, during the intermission. So completely has this method of using it succeeded, that we have never been tempted, to try any other.

We have also been in the habit of using an extract of the bark, called Carpenters precipitated extract, and have found it equally efficacious with the Quinine, and in some cases, apparently more so, inasmuch as the disease seemed less likely to return, after its use, than after that of Quinine. We give it, in doses, of about grs. ij every two hours, during the intermission, until some grs. xx ij have been taken.

Sometimes however the preparations of Bark fail to overcome the disease, and then we must resort to the other specific, arsenic. But owing to the poisonous qualities of the medicine, it should only be resorted to, after Quinine has failed, and should then be administered, with great caution, and should be carefully watched. It is generally employed in the form of Fowlers solution. This is given in doses of, from gtt v to x, repeated three or four times during the intermission.

These two remedies are our main dependence in this disease, and are adapted to opposite states of the system. The arsenic seems to produce a better effect in a full and somewhat plethoric habit of

body and the Quinine in a debilitated and depraved condition of the system.

Next to these two commanding remedies, in this disease, Prof. Pies of New Haven thinks, that Salicine should be ranked. He places considerable con=fidence in its powers, and recommends its use, where Quinine fails. The web of the black spider is said to possess considerable power, over the chills and fever, and is sometimes employed, after Quinine, as also are Black Pepper, Nutmeg, Nux Vomica, preparations of Iron and Zinc, Charcoal, Chamomile flowers, Eupatorium perfoliatum &c &c.

Now what is the "modus operandi" of these med=icines, in putting a stop to this disease? It manifestly cannot be by their Tonic properties, as their effect is much too speedily produced; and moreover many even deny, that the two great remedies Quinine and Arsenic, possess any Tonic powers at all. However this may be, they manifestly have a peculiar mode of action in this disease and it has been called antiperiodic. Perhaps they have a kind of stimulating effect upon the system, which counteracts the sedative

effects of the Malaria. Whatever their particular mode of action may be, in this case, we are fully acquainted with the fact, of their efficacy, and use them accordingly, though this mode of practice be but little better than empiricism.

Sometimes this disease is kept up by habit, and may then be broken in upon, by strong mental impressions, such as sudden and great joy, anger, fear, great anxiety and mental excitement, as also by strong impressions upon the imagination.

But it is not sufficient to merely break the chills, in agueish districts, where our patients are continually exposed to the exciting cause, but a prophylactic treatment should be employed. The most essential thing is, to avoid, as far as possible, exposure to the malarious influence, and where one is obliged to be exposed, small doses of Quinine may be occasionally taken, as a preventative. Indeed if we could prevail upon our patients, to adopt the plan, could we not in this way, by the continual use of small doses of Quinine, almost entirely prevent the occurrence of the disease, in infected districts. At any rate it is advisable to continue

the use of the Quinine for some time after the disease has been interrupted, to prevent its recurrence.

Of the sequelae of Intermittent fever, we intend saying nothing farther, than that the same remedies, which are found efficacious, in this disease have very great power, also, over its various sequelae.

Thus gentlemen of the Faculty, in compli=ance with your customary requisition, by which, it becomes necessary, that "each candidate for examination shall present to your Dean, a Thesis, of his own composi=tion, upon some medical subject," we have prepared the above, upon Intermittent fever, a disease, which is of such frequent occurrence, and so familiar to all, that it should, perhaps, hardly be chosen, as the subject of a Thesis; but as it is expected, that, what we offer shall be of our own composition, of course, it becomes us, to select that disease, with which, we may happen to be most familiar. And though we are conscious of know=ing little enough about any disease, yet we have chanced to see more of this, than of any other, and have ac=cordingly selected it, as the subject of our Thesis, and have treated it as we have been able, which we are fully aware is but very imperfectly.

An inaugural dissertation

On Neuralgia

Submitted to the examination

of the Provost, Regent & Faculty of Physic

of the University of Maryland

For the degree of

Doctor of Medicine

By

John A. Doyle

of Franklin Co

Pennsylvania

Gentlemen,

It should ever be a source of laudable pride and gratification to the medical practitioner, to see that profession to which he has dedicated his life, rising majestically above the grovelling sphere, of the charlatan and mountebank — the province of empiricism. The last half century has every where been marked, by the rapid strides of medical science towards the goal of preferment. Scarcely has the first dawning of letters and civilization, begun to disperse the mist of ignorance; ere her approach is seen; like the reflections of some radiant orb — shedding new lustre on her pathway.

The pages of her history are adorned with the deeds of noble and victorious achievement.

Her records present, for our admiration the fame of her illus-trious votaries. — who by their un-tiring zeal in her cause — who by their efforts to soothe the pangs of suffering humanity — and who by their extensive and well found-ed experience: afford examples wor-thy our most laudable emulation, and stand forth as beacon lights to guide the inexperienced mariner securely over the quicksands of hypothesis and uncertainty, and to conduct him safely into the haven of rational in-duction. But while we regard with admiration the onward march of med-ical skill, we must not be unconscious of the fact, that she is still somewhat defec-tive. Voluminous as are the records of her experience,

illimitable as are her therapeutical resources, and as extensive and diversified as have been her pathological researches, we are yet forced to acknowledge, that she has not yet fully emerged from the mazes of speculation and theory — To corroborate this, we have only to refer to that cruel tyrant, which but too often condemns its unfortunate victim to a life of torture and dispair; How often has the most penetrative genius been foiled in its attempts to define the character, and to trace out the etiology of neuralgia; How often has the medical practitioner — when called upon to give relief — been obliged to acknowledge the insufficiency of his art —

"The nature of neuralgia has ever given rise to great dis-

-crepancy of opinion amongst medical men; some have been inclined to look upon the dis-ease as one of inflammation; while others, with more propriety, denying this opinion their absent view it as merely a functional disease. It is true we do have occasionally, disease similating neuralgia; in which we find inflammation of the nervous sheath! But may not this — instead of inducing to say the disease had been inflammatory — be looked upon as being a condition in-duced by a long continuance of nervous irrition in the part, without bearing any necessary relation to the general character of the disease. Indeed, in many cases, we not only have an entire absence of all inflammatory symptoms, but we have, even,

symptoms which are altogether incompatible with an inflammatory condition; we frequently have, not only a total exemption from pain, during pressure, but we have decided relief afforded by it - The intermittent character which the pain sometimes assumes - its sudden accession and remission - the fact that tonics and stimulants do sometimes give relief, and that depletory measures, do sometimes evidently aggravate the symptoms, all go to prove the non-inflammatory character of the disease. Pathological investigations have hitherto been very unsatisfactory. Indeed it is a source of gloomy reflection to the pathological anatomist, that in many cases, exhibiting during life the most frightful evidence of nervous

irritation, and yet when, life having eventually succumbed to a long procedure of suffering, he comes with eager curiosity, to enquire into the cause of all these appalling phenomena, he finds no appreciable evidence of organic alteration – no constant – no prominent lesion of any part of the nervous system, to throw light upon the obscurity of his opinions, and enable him to fix with certainty, the nature and locality of the disease – He lays the knife down, in despair, and truly lamentable, is the consciousness of his ignorance.

In vain would I endeavour to find language, comprehensive enough to express at once the extreme diversity and intensity, of the suffering

peculiar to this disease. It has been described of every grade of severity, from a merely benumbing sensation, to a degree of torture extending to the utmost limits of human endurance. Sometimes associated with the pain, we perceive twitching of the muscles — perhaps rigid spasm — or we may see the whole frame quake beneath the violence of the shock. As I already have had occasion to remark, we frequently have an entire absence of pain, or an alleviation of suffering on making violent pressure; but what is most strange, is that in some of these cases of insensibility to severe pressure, a gentle touch may be sufficient to produce a violent paroxysm. The disease may be preceded by premonitory symptoms, ~~symptoms~~ — by a general feeling of langour

and indisposition, and increase gradually until it becomes almost intolerable; or it may without any premonition, pass with the quickness of an electic shock along the course of the nerve, and with an intensity of suffering, only known to those, who have been its victims

The disappearance of the paroxysm is no less variable. It may pass off, with an almost imperceptible march; or the patient may be suddenly transported from the imperious domination of a cruel tyrant, to a state of entire freedom and relief. Sometimes the disease assumes a periodical character the paroxysms recurring at regular and stated periods, although days, weeks, or even months may intervene between them,

It but rarely happens that this disease occurs but once, and then dis-

-appears not to return, much more frequently it continues during life; in this event the returning paroxysms may be mild and somewhat under the control of remediate measures; or the at-tacks may increase in frequency and violence, until life presents one unbroken series of excruciating torture

Death rarely takes place as a direct consequence of this disease; but by holding a long and con-tinuous empire of the nervous ener-gies, it may so far enervate their healthy action, and thereby impair the powers of the system, as to render life an easy prey to diseases, which it, otherwise, might have surmounted.

Owing to the general diffusion of the nervous system over all parts of the body, there is no part which

may not, under certain circum-
-stances, exhibit indications of
sensibility; consequently, we may
have neuralgia displaying itself
in any part of the body; still
it is remarkable, that it man-
-ifests a partiality for certain
locations. Particularly do we
see it evincing a disposition to
affect superficial nerves. Of these
the cranial distributions are
most frequently affected - giving
rise to that form of the disease,
known by the name of hemicrania
- The facial branches of the trigem-
-inal or fifth pair are very frequently
affected, causing one of the most
painful and frequently one of the
most intractable forms of the
disease. Sometimes it is fixed in
the nasal arch, & frontal sinus,
or in the ramifications of the nerve
over the globe of the eye - in this

case, the eye is very sensitive, and is intolerant to the least ray of light; this affection of the eye, has in some instances continued for years — bidding defiance to all attempts at alleviation. Next in frequency, perhaps, to its occurrence in the nerves distributed to the head and face, it may be found in the nerves of the lower extremities; particularly along the course of the great sciatic nerve — giving rise to a form of the disease, which is frequently very obstinate to remedial treatment. We not unfrequently have neuralgia, in the nerves ramifying in the intercostal spaces, this form has generally be attributed to spinal irritation; this in many cases may be true; but, that it is always so, we should not readily

admit; why the disease may manifest itself in other parts of the body through the medium of sympathy and not in this part. I think is not sufficiently evident.

In reference to the etiology of the disease, neuralgia may be dependent on the condition of the general system or a morbid condition of some part with which the seat of pain is connected by sympathy; or may arise from some modification, in the ~~nervous~~ nervous condition of the part immediately affected. As to the state of the general health which may be associated with, or give rise to neuralgia, we very frequently find a rheumatic or a gouty diathesis, or great anemia and general debility. The stomach should always be interrogated

in seeking the cause of this disease. as it is a fact well known that derangement of the digestive functions, will give rise to neuralgic pains in various parts of the body. Excesses of any kind, Spinal irritation, Chronic disease, or any thing that will deteriorate the vascular system, or induce general debility; are all causes which will predispose to the disease. All causes which influence powerfully the nervous centres - as vicissitudes of temperature - moral affections, or a habit of body peculiarly sensitive or nervous, may act as efficient causes. Cold and humidity are powerful exciting causes; sometimes the disease is kept up by mechanical agents, as tumours compressing the nerve, or spicula of bone irritating it; not unfrequently

a diseased tooth will be found to be the cause of facial neural-gia

Since we have seen how numerous and diversified are the causes, and how various the course and symptoms of neuralgia - we may readily infer that all cases, are not to be subjected to the same medical treatment. Although, it be true, that in many cases, presenting the most formidable aspect - cases in which appear to be concentrated, the elements of rebellion and cruelty, that medical science, as if by magical power, quells the tumultuous rioting of nervous agitation: yet cases are not of unfrequent occurrence, in which the disease, like a powerful and merciless foe, continues in its unrelenting career, in defiance of the unceasing dis-

-charge from medical batteries, and the most artful devices of medical invention. The method of treatment should always be based upon a knowledge of the circumstances (physical and moral) which have any thing to do in the production of the disease. Consequently, it should be our first object, when called to a case of neuralgia, to investigate as far as practicable into the condition of the general health, to see if there be any latent disease lurk-ing in the system, that might predispose to the disease. If we find this to be the case, we must endeavour to restore the general tone of health, at the same time that we attempt to restrain the violence of the paroxysm. We should next enquire if there be any local disease, particularly should we

trace the course of the affected nerve, if we find tumours or foreign bodies, we must if possible remove them. If we find derangement of the digestive function, we of course, endeavour to correct it; we may sometimes give relief by prohibiting some improper article of diet. If we should discover a tendency to constipation of the bowels, we must counteract it, by proper remedial measures

When the disease assumes the periodical form, we will find very beneficial effects from the use of quinia; when given in small doses it will often be found sufficient to give relief, should it, however, fail in small doses, we should not hesitate to administer it in doses sufficiently large, to give it a fair and decided

trial; should quinine fail, we might give arsenic a cautious trial. We should, however, use it with great circumspection, as it is thought to be, not generally so agreeable (as quinine) with the condition of the system peculiar to this disease; should these agents fail to break up the periodical character of the attacks, we may try emetics and the application of blisters.

We at all times find it imperative on us to invoke the aid of some narcotic, we sometimes succeed in effecting permanent relief by their use, and in most all cases restrain somewhat the violence of the paroxysms. Amongst all the narcotics opium is decidedly the most efficient, and consequently more worthy of consideration. Sometimes

we will find the salts of morphia or the acetum opii to agree best with the peculiarity of constitution belonging to the patient. We should be careful in administering it, lest we deaden, by its too long use, the susceptibility of the system to its effects. We may prevent this occurrence, by occasionally suspending its use; and interposing for a short time the use of some other narcotic. Almost all the narcotics have been used in the treatment of neuralgia, and all have been found at times beneficial. The extract of Bella-donna is frequently useful. Stramonium, Hyoscyamus & Conium, have had their advocates, and without doubt, they are frequently deserving of merit; we should give them in doses sufficiently large to produce evidence of their action

on the brain. The saturated tinct. of aconite has been highly extolled it should be given until it produces its peculiar tingling sensation

When there is evidence of nervous irregularity, added to the pain, we should combine with the narcotic some anti-spasmodic - as valerian - musk or asafœtida. A repetition of emetics, has sometimes been found highly beneficial -

The sub-carbonate of iron, has been highly recommended. We may readily infer, that it would be very advantageous, in that form arising from an anemical condition of the system, as we know iron has a tendency to improve the condition of the blood

We should be very attentive to the condition of the bowels during its use, as it is liable to accumulate

The nitrate of silver has some reputation in the cure of neuralgia; but a very serious objection to its use, is that it sometimes produces a discolouration of the skin. When the disease affects the cranium, causing hemicrania, the sulphate of quinine has been found very succesful, it is generally combined with oil of valerian. When the disease attacks the sciatic nerve, we very often find one of our best remedies, to consist in the administration of spirits of turpentine A gentle mercurial impression has sometimes been attended with ~~with~~ good consequences, particularly in cases, that were thought to have originated from a syphilitic tint; in cases of of this character, the Iodide of potassium has been signal in

its effects. We may often effect much by means of external applications; here again we generally find our most efficacious remedies among the list of narcotics. Belladonna plasters have been used with considerable benefit in many cases; when these fail, we may sometimes give relief by the use of an ointment, made of the extract of Belladonna and stramonium. Benefit has occasionally been derived ~~derived~~ from tobacco applied in the form of cataplasm; we should use this agent with caution, as it sometimes produces very great depression. The endermic method of applying opiates has been resorted to, the surface over the affected part may be denuded of its cuticle, by means of a small

blister, and then sprinkled over with a half of a grain of the acetate of morphia. Dry heat, and the hot vapour bath have been useful. Steaming with the vapour of sulphur is sometimes beneficial. An instance of its happy application in this way, came under my observation during the past summer.

An acquaintance of mine was seized with one of the most violent attacks of the disease, that we are ever called upon to witness; indeed it would be impossible to conceive any thing more horrible, than was the violence of his sufferings. The pain would ~~would~~ pass along the side of his neck, down his shoulder, arm and side with the rapidity of an electrick shock, and so violently as to cause his

whole frame to tremble beneath it. The shocks would pass in such quick succession, that there was scarcely a moments interruption. The paroxysm would continue five or six hours, and was of a periodical character - generally returning about the same hour. His physician, after giving him any quantity of purgatives and emetics, placed him under the use of the iodide of iron, with sarsaparilla. Next, all kinds of external applications were resorted to - as mustard plasters, laudanum &c - He frequently lay for hours, with the affected part in contact with ice. He had recourse to the use of hot, and cold baths, and also shower baths. He consumed large quantities of the carbonate of iron, aconite, pills of assafetida &c; but all were unable to give relief. In hopes of

gaining some benefit, from changing the influence which surrounding objects might have upon him, he visited some of the watering places; this was attended with some little benefit, the violence of the paroxysms, was somewhat mitigated, and the interval between them prolonged. But soon after he had returned home, the attacks began to increase in violence and frequency, until at length they became almost intolerable. He would some days have two paroxysms, each lasting about seven hours. He now began to use as an external application, a strong solution of sub. nitrate of bismuth. this failing, he next tried pustulation with croton oil, which also failing to give much relief, was soon laid aside. It was now recommended, that

he should be subjected to the use of the sulphur vapour bath, and should at the same time be blistered once a week, and use the carbonate of iron three times a day. After being under this treatment two or three days, the attacks decreased in frequency and severity, and after the elapse of a week it changed place and commenced on the other side; the character of the pain also changed; from being a pain that passed in successive shocks it now became a constant and even pain. In the course of another week his mouth became swollen, his gums sore, and his teeth became loose, having the appearance of severe ptyalism. "His physician thought he might with advantage establish an issue in his neck, instead of the appli-

-cation of the blister; but as it did not appear to be attended with much benefit, and was besides making too great a drain upon his constitution, he was obliged to suspend its use, and resume the application of the blisters.
After he had used the sulphur bath four or five times, the cuticle began to peal off his body, "the effect of the sulphur was to cause an equal and easy perspiration, which until then had been, in some degree, checked

"He is now almost free from pain; sometimes a slight cold, or some derangement of the digestive functions, will cause a slight, dull pain. "The same thing is experienced after rising in the morning. Being a literary gentleman, and a Professor in one of the foremost literary

institutions of our country, he is obliged to desist from all great mental and bodily exertion, otherwise, he will experience a slight return of the pain. But in all cases, when the pain does return it is so trivial, when contrasted with what he formerly suffered, that he regards it as almost nothing, and consequently congratulates himself every day, upon his release from a source of the most excruciating torture

There are many other modes of treatment, that have been tried in inveterate cases of ~~of~~ neuralgia, and many of them, at times, with decided advantage

Among them the introduction of a seton, or of an issue, has frequently had a good tendency. The application of the moxa

has sometimes been found highly efficacious. Acupuncturation, electricity and galvanism have been resorted to.

We may sometimes derive advantage, by calling to our aid, the influence of strong mental emotions — by breaking in upon the the old train of mental associations, and inviting the operations of his mind to a different field of action

That strong impressions upon the mind, do sometimes have a tendency to control the violence of the paroxysms, we have proof in the fact, that upon the arrival of the dentist to extract a diseased tooth, or when the surgeon is about to divide the nerve, that the disease is temporarily arrested

Although, as we have seen the almost countless resources, to which the practioner may have access

when treating this disease, yet cases do occur, in which they all fail to effect a beneficial influ-ence; indeed, we should require no better evidence, of the occasional intractable character of the dis-ease, than the multiplicity of remediate measures arrayed against it.

Now Gentlemen having finished my remarks on neuralgia, I submit them to your perusal — begging for for them, at your hands, a hearty reception; and invoking for their imperfections, the exercise of your kindest indulgence

AN INAUGURAL DISSERTATION

on

RELUSAO

Submitted to the examination

of the

Provost Regents & Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

James E. Porter Boulden

of New Castle County

Delaware

To

Samuel Chew M.D.

Professor of Materia Medica & Therapeutics

in the

University of Maryland

as

an humble token of respect

for

his classical & medical attainments

for

his characteristic urbanity of manners

and

the interest he manifests

in

the studies & success

of those

who place themselves under his instruction

these imperfect remarks

are affectionately inscribed

by

his friend and pupil

the author

In accordance with the long established requisition of this time honored Institution, making it incumbent upon each candidate for the degree of Doctor of Medicine, to write a Thesis on some subject connected with the Medical Sciences, the author would respectfully submit to your consideration the following remarks upon a class of agents which he conceives has been too much neglected but which he looks upon as constituting one of the most important set of remedial materials that the Physician employs in the cure of disease. We are apt to say to look with too much indifference upon this class of curative agents or undervalue the great principle of their action, the principle of revulsion, "which, as remarks M. Begin, "ought to become the object of more extensive and

useful considerations in practice until the whole extent of its influence, and the astonishing variety of which it is susceptible in its applications, shall be better understood."

Now what is this great principle of which we speak? it is this, that two irritants cannot readily co-exist in the system; one will have a tendency to overcome the other; or in other words, if, during the existence of a morbid irritation in some internal organ, a new or artificial irritation be established the previously existing may subside and be concentrated in the part which is the seat of the new irritation. Hence we perceive the infinitely diversified applicability of this principle to the cure of disease, the principle upon which

more articles of the Materia Medica act than at the first glance we would be led to suppose, in fact there are many classes of agents other than those usually embraced under the head of revulsives that act almost entirely upon this principle; it is obvious that all those belonging to the class of Excitants are capable of manifesting a derivative effect, in a very considerable measure, do the virtues of tonics depend upon this principle by the new impressions they excite upon the nerves of the stomach, and in fact upon this principle do all local stimulants whether they come in contact with the mucous lining of the alimentary canal as cathartics, whether employed with

the view of favouring the
expectoration of mucous from the
lungs and air passages, whether
applied to the cutaneous surface
or with a view to their specific
action upon the kidneys, or
whether administered with
the intention of exciting a
new action in the glandular
and follicular system as
mercury appears to be capable
of doing depends for their
efficacy and virtue.

Viewing the different articles
embraced under the divisions
above alluded to as excellent
as agents capable of soliciting
the organic activity morbidly
existing in one part, to another
part where its existence
would be less deleterious to
the system, we would inquire
what more important, prompt,

and efficacious means have we whereby we are enable to control or ameliorate the various ills which human flesh is heir to than derivatives afford? Certainly we fortunately have at our command many other agents such as sedatives &c capable of exercising a decidedly salutary effect upon the animal economy, but very few, if any, which are more capable at times of breaking in upon an habitual derangement of action and inducing a healthy condition (by virtue of their counter-irritant properties). Even were the articles to which we have reference capable of accomplishing no other object than the calling back, as in those diseases termed metastatic, a morbid irritation secondarily existing in some

tissue or organ to the original seat of the disorder, where that residing in some less important part they should command our highest consideration and cause us to resort more frequently to their therapeutical employment than we apprehend is the practice of most physicians. but when we reflect on the varied and many indications which they are capable of fulfilling of the properties which they possess in detracting irritation from some internal organ and determining the morbid manifestations to some part of the cutaneous surface, of relieving hyperemia or inflammation of certain organs by inducing a new artificial condition of the system thus deriving from the morbid one already existing and occasioning

its removal, we cannot but come to the conclusion that there are no remedial agents which possess more general virtues, and which are suited to a greater variety of morbid phenomena than the class under consideration.

Having premised the aforegoing remarks we will next proceed to speak of some of the most important morbid conditions which the action of revellents is capable of overcoming and the rules which should be observed in their employment, but first we would intimate that our remarks will not be strictly confined merely to the employment, and the indications which they are capable of fulfilling of those agents ordinarily embraced under the

head of revulsives but will incidentally refer to some of those other great classes or agents of the Materia Medica the efficacy of whose action does not depend solely upon their revulsive properties as is the case perhaps in reference to the rubefacient, suppurative, or escharotic cutaneous revellents, but whose virtues are no doubt in a great measure dependent upon this principle. We would be the more justified in following this course were we to adopt the views of Begin who remarks in reference to the above revellents, the rubefacients &c, that they alone have engaged the attention of practitioners and that frictions, baths, cataplasms in a word all agents calculated to solicit the organic activity concentrated internally, to some

external part are not esteemed revulsive, and reciprocally the effects of a multitude of stimulants on the digestive organs heaped in during the most serious acute disorders, and whose impression is not always mortal are not explicable to a great number of Physicians, because they do not recognize in them the revulsive effects which such agents occasionally produce. In the Phlegmasia. The great advantages to be derived from the use of revulsents are never so manifest as when employed in various local inflammations. It is generally in those inflammations of a local character that we expect to derive the greatest advantage from the employment of counter-irritants. If we have diminished the

violence of the circulating forces by appropriate sedative measures, such as general bleeding &c, a resort to those agents which create a centre of fluxion in a part distinct from that which is the seat of the morbid action thereby detracting from the unhealthy excitement going on therein, will be followed by the most salutary results; where the beneficial effects to be derived from the application of cups or leeches are made apparent, here also the best results are witnessed when an appeal is made to the judicious employment of various local stimulants such as blisters, &c, or any applications which cause excited capillary action and increased vascular and nervous energy in the part to which they are applied; the latter

objects we all know that, as a general rule we should seek to accomplish for we conceive that a resort to the more potent measures such as issues and setons which produce a deep degree of inflammation can rarely be necessary as it does not seem probable that the derivative virtues of local stimulants are in any wise promoted by the discharge which they create; it is hardly necessary for us to state here that we except those cases in which cupping leeches &c are employed for under these circumstances though we are at the same time availing ourselves of the counter-irritant effects which such appliances are capable of affording yet manifestly the ostensible object and main indication is to relieve the hyperemia of certain organs

by the local abstraction of blood, and we should be the less disposed to resort to the more active counter-irritants such as the moxa &c when we reflect that though they may derive from the existing irritation may yet develop such a morbidly increased excitement and so impress the general system as to aggravate the primary disorder. Yet there may be cases which render the more energetic employment of substances calculated to produce suppurative inflammation proper for it occasionally occurs that a violent degree of inflammation as results from the use of the moxa may accomplish what other activities of epispastics have failed to accomplish; and a resort to the more violent irritants will be the more advisable when we take into consideration

that the less intense artificial irritations which we may be otherwise inducing not being of itself capable of breaking in upon the morbid alternative, may be the means of causing us not only to neglect the employment of more active and energetic measures until the opportunity to render relief has passed, but would be as it were, adding fuel to the flame, increasing the general morbid excitement without overcoming the original diseased condition.
With regard to the treatment of the various phlegmasiæ and the employment of counter irritants there is one fact that we must carefully bear in mind that they generally are not indicated in the first stages of active inflammations, and should only be resorted to after the inflammatory tumult has been allayed

by the free use of the lancet, for it has we believe been observed that usually during the exalted state of the vital actions but little effect is produced by revulsents. The author is however acquainted with a gentleman an intelligent Graduate of this school now practicing in one of the southern counties of this state who appeals to the use of blisters simultaneously with the use of the lancet and who in this practice has been remarkably successful, though in following it he differs from the views of most writers upon the subject and it may be from the instructions imparted to him by his alma mater, than which there difficult to find a nobler, yet as he has been a pupil of that great instructor Experience and must excuse

him for departing from the former precepts, and hearkening to the latter in acting in accordance with which we are confident he brings into exercise that clear and deliberative judgement which every physician should possess, and without which he is hardly prepared to meet the multifarious responsibilities of his profession.

It would be rather superfluous for us to detail each particular inflammatory condition that would most likely be benefited by the employment of revellents, as a knowledge of their general mode of action will suggest their therapeutical value in each particular case.

In regard to the particular part which should be the seat of the new irritation there is considerable difference of sentiment, one author

remarking that the stimulant should be applied as near as possible to the diseased organ or tissue, whilst another attends that there should be a direct nervous communication between the part affected and the region selected as the seat of the new irritation, whilst still another maintains that it is immaterial what part of the surface they are placed in contact with. These differences of opinion we presume arise from the fact that the exact modus operandi of revellents is not well understood, but if we bear it in mind that they act by virtue of that law of the economy which has a tendency to prevent the existence of two irritants at the same time in the system we would be induced to suppose that it cannot be a matter of much moment where we produce the

artificial excitement due regard of course being had to the delicacy of certain organs, and the peculiar sympathetic relations they may sustain to others. In inflammation of the encephalic membranes blisters are usually applied to the nape of the neck, but there is no obvious reason why this part should be selected in preference to the top of the sternum, as we have repeated instances where their application in the latter region has been equally as efficacious as when applied in the former locality. Nor do we think that in those diseases which are occasionally transferred from one part to another though here certainly one of our most efficacious healing measures is the timely employment of derivatives that the part from which the metastasis has taken place should invariably be the seat of the artificial

irritation, for it does not often happen that after rheumatism has been transferred from the joints to the heart that the application of revellents to the former will be of much avail, the great central organ of the circulation being attacked, a degree of irritation is established that demands a more immediate and active treatment than that which would be pursued in endeavouring to re-establish the articular inflammation. But still if revellents have not proved so serviceable in these particular cases used in the manner mentioned they have proved when otherwise employed highly efficient in at least ameliorating the symptoms of this obstinate constitutional malady. there are however cases of metastatic disease where we may with some hope of success and benefit endeavour to recall the inflammation from

an organ secondarily attacked to the original seat of the disorder, as in Parotitis. Here through some peculiar law of the system not easily appreciated the disease often leaves the gland and becomes centred in the corresponding testicle in males, or Mamma in females, and we can occasionally succeed in inducing the disease to return to the part primarily affected by the employment of proper revulsive measures.

The surface of the body is not the only part which is selected as the seat of the new irritation. the alimentary canal is often acted upon for the purpose of transferring excitement and drawing the current of the fluids from the part affected. here active cathartics such as the saline or calomel and jalap have a double operation, they not only

draw off the fluids of the system by their action upon an exhaling surface but they create new and strong impressions upon, and direct irritation towards parts where such irritation would be relatively safe this plan has sometimes succeeded in arresting a local inflammation as is related in Professor Dunglison's excellent Materia Medica in regard to cases mentioned to him by our present worthy and able Professor of Obstetrics who states that in Mastitis and Mastodynia Apostematosa, occuring after delivery when the symptoms have strongly threatened suppuration he had completely and suddenly removed the hypereemia by a combination of the Sulphate of potash and the tartrate of antimony and potassa, given so as to produce full vomiting and purging in this way an afflux of vital activity was

provoked towards the abdominal organs and a corresponding derivation took place from the inflammed mammary. In fact we may remark that purgatives and emetics are our most valuable internal revulsives. Mercury is especially valuable on account of the revulsion it induces in the glandular and follicular system, as also are the drastic purgatives in diseases of the brain.

In Hemorrhages. Pretty much the same remarks used in reference to the utility of revulsives in inflammations are applicable to their usefulness in the various hemorrhages. Here our first grand measure if the hemorrhage be of a sthenic character is to reduce the vascular activity as also the general amount of blood in the system by proper depleting means, which means moreover are at the same time revulsive by

causing a determination to the part which we have selected from whence we abstract from the body a portion of its circulating fluid. After the judicious employment of these measures we will find the use of revulsives of much value in relieving the hyperemic condition which the hemorrhagic effusion appears to be consequent upon we have a familiar instance of the efficacy of revellents in Epistaxis viz. salt applied to the nape of the neck by the new impression which it produces acts upon the nasal mucous membrane arresting the hemorrhage almost as efficaciously as the immediate application of an astringent would. In hemaptysis the application of sapponants or rubefacients to the thorax by causing a centre of fluxion to parts distinct

from the seat of the hemorrhage or to vessels which are not branches of the arterial trunks from whence the hemorrhage proceeds, will often ameliorate the symptoms; and in the hemaptysis caused by the presence of tubercles we find them extremely useful, here a succession of blisters applied over the chest will be found efficacious and convenient

We witness their usefulness in haematemesis, melaena &c and where in a vicarious hemorrhage we perceive that the first discharge was less hazardous to life than the one which has supersedeit it here becomes advisable to reestablish the original flow, which may be effected by hot baths, or various stimulating applications. we may also make use of similar meads when the hemorrhagic discharge

is consequent upon the suppressing of some healthy secretions as the menses, here we are enabled to secure the natural discharge by hip baths, purgatives and Pediluvium.

Of the hemorrhagic affections which are peculiarly benefitted by the administration of internal derivatives we might mention cerebral apoplexy, here drastic purgatives such as jalap, gamboge &c, by the new impression they excite upon the lower part of the alimentary canal, derive from the morbid action going on within the brain, and are in fact on this account among our most valuable means of cure, as adjuvants at least, in this distressing disease.

In fevers. It is to prevent the tendency to internal congestions

during the cold stage of pernicious forms of remittent and intermittent fevers, that we find a resource to counter irritants in the shape of sinapisms over the epigastric region &c, followed by the happiest results in these cases we find them of immense value, for it often happens that the cold stage is unusually protracted, that reaction does not come on as soon as we might expect it, under these circumstances by concentrating the vital actions to the surface we prevent the internal accumulations which are going on and which might prove fatal to the patient. the epispastic which we generally choose in the congestive stage of an intermittent is the flour of mustard applied in the form of a sinapism, or

mustard poultice; and we select it because its operation is more speedy than the plaster of cantharides. The irritation produced by it in the nerves and vessels of the skin, is soon extended in all directions; the ganglionic, cerebro-spinal and spinal system of nerves feel the influence, and, in this way new force is communicated to the vital movements, reaction becomes established especially if recourse be had at the same time to appropriate adjuvants and all apprehension of death during the stage of congestion vanishes. Dr Power remarked during the present winters course of lectures that the employment of counter-irritants, such as cups, &c placed over the seat of mischief for the purpose of

checking the irregular determinations which occur in the pernicious forms of malarious fevers is next in efficacy to quinine in the cure of the disease, by their restoring the nervous energy and rousing up the torpor of the capillary system. in producing derivation by friction or mustard plaster the employment of the former is indicated during the paroxysm, there being less reason to induce more prompt and speedy action than the latter would accomplish. the blisters should be used after the subsidence of the paroxysm and should be constantly renewed. cold water in the cases above mentioned by the shock it produces upon the nervous system acts as a good revulsive, and by following this with friction we are enabled to restore the activity

of the capillary circulation and the general tone of the system — protecting any inflammatory condition coexisting with the fever the continuance of which would have a tendency to prolong and aggravate the febrile symptoms our revulsive agents are as we have before intimated as peculiarly appropriate as in overcoming the visceral engorgements of which we have first spoken. It is not only to prevent congestions, and inflammatory complications to overcome, that we resort to epispastics &c; in that irritable state of the stomach which we find as an almost constant condition in fevers generally, the application of a large mustard plaster over the epigastric region will mostly dissipate the disagreeable sensations,

and the application of blisters in any region which corresponds with an organ upon which the stress of the disease has fallen, as upon the chest to relieve dyspnea &c. to the head or its vicinity where there is much cerebral discomfort, over the abdomen in certain disordered conditions of that cavity &c. will be attended in many cases with salutary results. In the use of derivatives we must be guided by general principles and a correct knowledge of their virtues will enable us to fulfill many indications and adapt them to the cure of a great variety of morbid phenomena occurring during the febrile movement.

Nervous disorders. In regard to diseases of the nervous system we would merely remark that

here our remedies must be addressed to the morbid state of organization upon which the disorder depends. If the disease depends upon an inflammatory action going on within the encephalon or implicating any of the great nervous centres, accompanied by violent head-ache, full strong pulse, and the general signs of augmented vascular activity, the manifest indication is to make use of appropriate depleting measures, and here we will find that, conjoined with the use of the lancet, the evacuating and revulsive operation of cups comes in very well to our assistance. In some other disorders of the nervous system we cannot very readily appreciate the cause and when in such cases we cannot trace it to any local disorder but conclude that it depends upon

some peculiar alienation of the mind not well understood we must have recourse to mental remedies change of air, of scene, residence &c the ever varying variety of travel the diverting as much as possible the patients mind from any objects or emotions of a gloomy character upon which it may be dwelling and which may be the cause of the derangement, and in fact endeavouring as much as possible to alter all the physical circumstances connected with the individuals previous mode of living, and bringing about him those calculated to break in upon the old associations upon whose existence perhaps the disease chiefly depends.

It were useless for me to recount in detail each particular nervous disorder wherein the action of

revulsives has proved efficacious, suffice it to say that there are many of the Neuroses that are not amenable to any treatment we may employ and in the management of which we must be guided by those great general principles of our Science which our judgment will enable us to carry out in each particular case; we would however remark that it is cheifly in neuralgic diseases that the benefit of rapid counter-irritants such as the preparations of ammonia is most marked and the use of Burgundy pitch plaster, calonics, frictions and various liniments in diseases of a neuropathic character will often produce decidedly beneficial effects.

We have now taken a cursory glance at some of the

chief morbid phenomena which are more or less under the control of revulsion. The field for inquiry and discussion is extensive and can be but partially traversed in an ordinary medical Thesis. Had we the time and talent we might fill volumes in enumerating the various diseased conditions which counter irritation is capable of overcoming and as every physical and moral agent capable of modifying the functions of innervation and through it those of circulation and secretion must possess the power of acting as a revellent, we can conceive what a vast and interesting theme the subject of the present remarks presents to the mind of the inquiring and intelligent physician.

Dr. Twere scarcely to be supposed that a tyro like the author

would be capable of entering fully into or rendering justice to the topic. He trusts that what he has already ventured will be received as an assurance that he has at least some knowledge of the indications which derivation is capable of fulfilling and if his remarks are incomplete he hopes that the nature of the topic and the reasonable space to which a student should restrict himself in a thesis will be accepted as apologies for not branching out more extensively and of indulging in those many considerations which naturally suggest themselves to the mind whilst contemplating such a subject.

An Inaugural Dissertation on Opium.

Submitted to the examination of the Provost, Regents and Faculty of Physic of the University of Maryland for the Degree of Doctor of Medicine

By

George M. Gilbert A. M.

Baltimore Feb. 1st 1847.

Respectfully Dedicated
to
Samuel Chew, M. D.
Professor of Therapeutics, Materia Medica
and
Hygiene
in the
University of Maryland.

Opium.

As all mankind are liable to disease, and as almost, if not always disease is accompanied with pain, therefore, those medicines which tend to allay and relieve it, ought to, and necessarily do hold a high ranks in the estimation of medical men. Among the soothing and narcotic drugs, that which we have taken for our subject - opium - holds the first rank; grateful indeed should poor mortality be for this almost inappreciable boon, even when all other medicines fail & hope of recovery gone by, Opium by its euthanasial virtues, smooths the sufferers path to the grave & enables him to give up existence almost without a sigh.

A drug so important to the physician, deserves a careful notice of its properties, and we propose herein

to endeavour to delineate them, though at the same time scarcely hope to deduce any thing new from so well studied a subject.

What is Opium? it is the inspissated juice of the Papaver Somniferum (Sleep bearing poppy), after having undergone a manufacturing process, which is different in different countries; It is cultivated mainly in the East & medicated principally in India Turkey and Persia; the poppy is also grown somewhat in England, France and Italy. The best article is that of Turkey, being the juice from the heads & upper part of the stalks, expressed under the action of a gentle heat; the other and more common kinds are made from the whole plant. Opium is often mixed with foreign matters & with the powdered leaves and stems of the plant made into a consistent mass with some gummy substance. The following is a good rule for

testing its quality. Good Opium is very heavy of a dense texture & commonly soft enough to receive an impression from the hand, Its colour of a very dark brown yellow, of a strong smell and bitter taste, nearly free from leaves and when rubbed between the thumb & fingers no grit or roughness is felt, in general that which is soft is not good.

Opium is a very ancient drug. Dioscorides mentions its use & mode of preparing it 1800 years ago & it was evidently known to Hippocrates who lived 450 years before Christ. It was well known to the ancient Greeks & Homer in his poems mentions the poppy under the name of μηκων. But the opium then & now must have been somewhat different & we have reason to believe that its secondary benefits & properties were not much understood until about the last of the seventeenth century, about

the time of Sydenham, when the English Pharmacopoeia embraced it. Since that time numerous improvements have been made on its practice, its constituent principles better understood & some very valuable preparations invented. For the proper analysis of this drug we are indebted mainly to the labours of the French & German Chemists, who in the early part of this century discovered existing in it several powerful substances which were before unknown, what they were we will now go on to say.

The principal constituents of Opium are Narcotin, Morphia & Meconic Acid, there are a number more of no great importance. Narcotin was discovered by a French Chemist Derosné, who gave it the name of Salt of Opium, & others under the belief that it contained the active principle gave it its present title which we think altogether inappropriate

as from the experiments of Magendie & others it is proved to have little or no power in comparison with Morphia. Some ten or fifteen years afterwards, A German Chemist discovered another principle a singular Alkali combined with an acid, the alkali he called Morphium & the acid Meconic, this compound appears to be the abode of the active principle and in chemical combination forms some very valuable preparations — Sulph. Morph — Acetat. Morph — Nit Morph &c.
Meconic acid is generally in a combined state with the Alkali & is never used alone, It has been supposed that it is the cause of the deleterious effects of the drug, but the question is still undecided.
Of the other constituents it would be but waste time to speak, as they are of no consequence, except in the aggregate.

It has long been a matter of doubt whether we should rank opium among the stimulants or sedatives, but the question seems in our opinion totally superfluous, Every one knows it is both a stimulant & a sedative & of course holds its place among the narcotics. It varies in its effects in proportion to the dose. In a small quantity frequently repeated it excites & elevates the imagination — soothes & tranquilizes one in the most gentle manner, if the person taking it be an imaginative & intellectual person — the most delightful ideas take possession of his brain, his soul appears to have left his mortal abode & travelled to a more ethereal world. Taken in this way the Author or Poet finds it his most powerful auxiliary & we have no doubt much of the finest poetry we have, has arisen from Papaverian inspiration. Possessing the power of

dipping the mind in Lethe it is eagerly sought after by the miserable & afflicted and when once taken & the relief fully understood, it requires a strong effort to resist the continuance of the practice. If a very large quantity is taken it produces symptoms resembling apoplexy & dead-drunkenness, the vessels of the brain suffer plethora the muscles & respiratory organs are affected & enfeebled, the blood is not propelled through the lungs sufficiently to be oxygenized, the whole of the sensible part of the body becomes torpid & the person dies of Coma. The lowest fatal dose is four grains, a much larger dose in those unaccustomed to it is apt to produce emesis & so prevent fatal consequences. With this as with other intoxicating agents it is weakened by frequent repetition & it is astonishing how much the human system may be brought to bear, De Quincy in his "Confessions of an Opium Eater" mentions.

exceedingly large quantities he was accustomed to take, 8000 drops per diem were scarcely sufficient to tranquilize his existence; He likewise mentions that at one time being visited by a native East Indian, he in order to make acquaintance gave him a piece of opium almost enough to last him a week, to his utter amazement the man bolted it down & did not appear to suffer in the least from the operation; The amount of the drug consumed in London is surprising, The cause of its large consumption there, may we think be attributed to the sudden rise & indirect influence of temperance societies, persons debarred of their accustomed stimulus too easily exchange it for opium & if they were in danger before, still more so are they now. This is no place for the remark, but one would think that the pledge includes all that can intoxicate.

It is a singular fact, that though so many post mortems have been

held on persons killed by this drug, no constant appearances have been detected to warrant a direct conclusion as to its manner of producing death, We know in a general way that it produces torpor of the whole sensorium, but no physical appearances present themselves after death. Mr Wood in his Dispensatory, gives his opinion that it first operates on & stimulates the nerves, then is absorbed generally into the system, which is relaxed & torpid after the agitation.

In case of poisoning from opium the first thing to be inquired into is whether the dose taken was liquid or solid, If the latter Emetics are of much more service than the stomach pump, as the particles tend to clog the instrument up & delay relief, If the former nothing is better than the pump, washing out the stomach again & again & injecting strong vegetable infusions as Coffee & the like Raise the head & shoulders, try & bring about reaction by means of the cold douche

We have thought that in these cases, the moxas might be beneficial, being accompanied with no pain unless the end was accomplished & then the pain is nothing in comparison with the pleasure of the result. Artificial respiration if we arrive late may be kept up & if the theory that Dewitt speaks of in his surgery is true — namely that when any one dies of a poisonous narcotic, the heart continues to beat a little after death or rather often all nervous sensibility has ceased & that on keeping up respiration sufficient to keep the blood pure, the body will gradually recover its functions — Why! it is certainly rescepsary & we do not see why any case of the kind should prove fatal if properly treated in time.

But let us look at the admirable effects of this drug in medicine. There is scarcely any disease in which it may not be of some service & in some affections its effects are so certain that it

it rendered almost an empiric remedy. What are the indications we can answer with opium — To support the system & stimulate it to action — To allay & soothe pain and irritation — To relieve spasmodic action — To bring on sleep — To check increased and morbid secretions. To answer all these ends, it is necessary to administer it in various ways & doses: As a general rule it is better not to exhibit the drug in inflammatory affections, until it has been somewhat subdued & diaphoretics as antimony, so employed, it is then often of great service, assisting the operation of other agents in a manner most agreeable & satisfactory.

In intermittents we often find opium of essential service, either by itself or in combination with others, it is supposed by some to aid the action of quinine in a considerable degree: It may be given either in the intermissions or in

the hot or cold stage: given before the chill comes on, it appears to stop the dread & anxiety with which the patient watches its approach, he continues chearful & the cold paroxysm is lessened very much in violence, it is apt however to make up for it in the hot stage, given then it materially lessens the fever & appears to produce perspiration much easier & sooner than if not given. The known of one case in which it proved or appeared to prove a complete cure, it was a negro man on the E Shore of Maryland, he had been afflicted with chills for almost a year, it was difficult to resolve them into any type, they appeared to be however the double tertian, He was thus rendered almost altogether useless His master had been doctoring him for some time & at length gave up the case for a bad job & asked me as I was studying medicine what to give

him, I advised opium & having found out that his chill would come off in about a half an hour, I gave him half a drachm of very fine Tinct Opii in a half gill of raw brandy & requested his master to set him to work, he immediately went to grubbing roots, after a while instead of the chill the perspiration began to come & rolled off in large drops, I allowed him to work for some time longer & then told him to go lie down & sleep, he did so, woke up & has not had a chill since; Now whether this was the effect of the Opium, Brandy or work or all combined I know not but it proved successful & if we have another opportunity will try it again.

Opium is particularly useful in lulling pain & irritation, in diseases of the nerves, it is of inestimable service assuaging the maddening pains that sometimes accompany their being diseased.

In Gout and Acute Rheumatism when the nerves are in a high state of inflammation and have started the arteries to throbbing & pulsating, like as a patient expressed it "so many red hot devils under the skin", give a full dose of this anodyne & the nerves cease throbbing, the arteries pulsate moderately diaphoresis ensues & perhaps sleep comes on and respites the sufferer.

In those more moderate pains, but which sometimes are very troublesome, those arising from indigestion & a dyspeptic state, it is also beneficial; In these cases small doses taken frequently should be prescribed, Dovers Powder is very well adapted to this state of the bowels & tends to remove that alternate & combined lassitude & irritability. There is particular danger however in Dyspepsia, after patients have obtained relief from this remedy of becoming too much attached to it, Being for the most part more

or less hypochondriac, they will just as often take it for diseases of their imagination as any thing else, and after a while as is usual with those addicted to it, take it for its own sake & from want of energy to break off the practice; In this case as in many others it is hard that there should be "Nul plaisir sans peine".
In Neuralgia; Fic Dolorenx, applied in the shape of a plaster over the artery or nerve it serves frequently to ease the pain, this remedy however in these cases is now almost superseded by others as Belladonna & especially Aconite; In Tooth ache, Ear Ache, it is also of service, either taken internally producing sleep or in the former by putting a plug of it in the tooth, In the latter mixed with luke warm water & injected into the meatus, different from "pain of a cracked Hebenon" it affords much relief.

As Opium prospes great power to lessen spasmodic contractions it is—

found of great use in Painters colic, Tetanus &c, Its exhibition in cases of the former, has frequently been attended with the happiest effects, to be successful in this disease, it should be given in very large & repeated doses, small ones appear to be attended with no effect, Ware mentions a case in which ten grains in substance were given every hour, until two scruples were taken, under which treatment the disease yielded, the bowels being made susceptible to the action of purgatives which given by themselves were perfectly inert. In the common cramp colic so common in the summer season it is often of essential service.

There are some affections particularly those attended with much irritation, where the great desideratum is to obtain sleep, in such cases Opium fully answers the indications, sometimes given alone, but more commonly in connection

with other agents. In Mania a potu for instance which consists mainly of nervous irritation, the great point there is to subdue it & the best if not only way is to induce sleep. When that is accomplished the disease may be said to be conquered. Here Opium, either in its usual form or in the shape of Morphia must be given with an unsparing hand, We know that if the patient does not obtain rest he must die & sedatives must be administered until that object is accomplished. My worthy preceptor Dr R. N. Wright tells me he is in the habit of putting the patient always in the warm bath first & then gives his purgative & sedatives. He deprecates very much the custom of giving opium by itself & thinks it should never be exhibited prior to the bath, which exercises a relaxing influence on the whole

body & sometimes from a furious delirium the patient sinks into a quiet slumber.

In inflamatory affections of the chest it is only of service after the inflammation has been for the most part subdued; In our own case we have found much relief & obtained a good nights rest from this drug, when afflicted with severe catarrhs accompanied with a troublesome cough, taken before going to bed it appeared to stop entirely the nightly cough & brought on a copious perspiration in its stead, with refreshing and undisturbed sleep, the best preparation for this purpose however is the common Paregoric elixir two or three drachms of which may be taken & if not strong enough infuse a few drops of Tinct Opii in it: The Paregoric containing not more than two grains of opium to the ounce, is not of much avail when taken by persons accustomed

to stimulus, Indeed it is well to bear in mind when administering this medicine that some persons are very easily affected by a small quantity not being in the habit of using stimulants, whilst others who are resist large doses and one would be astonished did he not know the cause. This point however is not allowed by all to be true, yet all the experience we have had with it & observed in others warrant that conclusion, & we cannot believe that a grain of opium would affect an habitual drunkard as powerfully as it would one who was strictly temperate.

But to return to Inflammatory affections, In these cases after a full bleeding & depletory measures have been taken, Opium is of some service in tending to suppress that general inflammation likely to supervene on irritation of the nervous system.

In some cases there is a natural irritability in the constitution and in these constitutions when afflicted with local disease, Opium is of essential service. In Inflammation this is sometimes a very dangerous remedy, it is apt to soothe the patient a little too effectually if given at improper times. The tendency to death by Opium is by coma & when you observe your patient looks rather blue about the face & lips & you see other signs that the blood is not duly arterialized, you must not give him a sedative else it will prove an effectual one, but if his countenance and lips looks florid and natural, if he wants sleep & cannot obtain it by reason of cough or any thing else, then your anodyne will be of service. In the last stage of that dreadful disease Phthisis, when we content ourselves with watching the progress of the disease Opium is the chief agent we use, we give it as an anodyne & to check those colliquative alvine discharges which harass the patient. Opium in these cases however is sometimes

superseded by other narcotics Conium for example, which does not cause such a heating of the system as opium: Still the latter being the most convenient and least hazardous is preferable to any other anodyne yet in use in such cases.

In Dysentery after the inflammation is in a measure subdued, this drug is a most valuable assistant, it has long been used in this disease even from the time of Sydenham It is best given in the form of Dovers powder combined with Calomel or blue pill and frequently assists in creating substantial discharges: In the latter stages of the disease when a constant diarrhoea sets in, it is very beneficial by stopping the discharge.

In Cholera Opium is of much service, and in the malignant Asiatic form in which it appeared some years since it was used with much success, putting a stop to the most obstinate diarrhoea by being given in minute doses with Calomel.

Opium has a tendency to act on & check morbid and increased secretions. In Hepatitis after depletory measures have been taken, combined with antimony & calomel it works admirably & by such treatment, in connection with the other common remedies a cure can almost always be effected. In Diabetes, Dr Watson speaks of its use in the highest terms, it quiets the nervous — irritability of the patient, allays most of his distressing sensations & restrains in a remarkable manner the morbid flow from the kidneys, It does not have a — curative influence, it has a controlling influence over the sugar but does not remove it. Moderate doses in this disease answer as well as large ones. There are some other diseases in which this remedy is used, but we have mentioned the principal ones. In almost every affection however there are some stages in which it may be beneficial and as an article of the Materia Medica, may we think rank among the first.

Upon the whole therefore, we may justly regard
Opium as a great blessing & also a great bane, 8.
to a great portion of the human race it is a
curse, blasting and dozing up their energies,
turning them into dull dreamers, taking their
attention from internal improvement of every kind
& making them laggards in the race of civilization
and refinement. Better far would it have been
had their sagacious prophet not denied his
followers the use of wine, of two evils choose the
least & trying to teach them to avoid Scylla he
has led them upon Charybdis.
With regard to the manner in which it is pre-
pared for chewing, it is prepared in Turkey
in small pkgs, like our tobacco, somewhat
sweetened with juices and syrups & what is
singular generally has two words stamped on
them, signifying "Work of God." In some countries
where they chew it & when two or three ⅜s
a day is not sufficient, they mix with it
corrosive sublimate & gradually increase the
quantity until it acts as a stimulant.

The practice of opium chewing & laudanum drinking is not altogether confined to the east, it is much practised in France, England & America. The fashionable ladies of the present day often find themselves unable to find energy to support them through their fatiguing night parties &c, and are indebted too frequently to this drug for their charming vivacity & spirits: It is a practice which is the cause of many a broken constitution & the physician should be aware of this as probably he will meet many cases of the kind & the patients perhaps unconscious of the cause. This baneful practice is often acquired by those who attempt to doctor themselves & inadvertently they slip into the habit, which they cannot shake off, At first they find it allays their pain & take it for that purpose, after that to get rid of the distressing feelings occasioned by the want of it. The poet Coleridge was an illustrious example of this, being afflicted with swelling of his knees accompanied with much pain, he resorted to its use & became so addicted to it as to make him

miserable for life. His complaints in his "Confessions" are truly affecting, he says "For ten years the anguish of my spirit has been indescribable, the sense of my danger staring, but the consciousness of my guilt worse than all". De Quincy too, in his works gives a thrilling account of his miseries "Night brings the torments of hell, but day the bliss of Paradise". We would fain hope this description is not irrelevant to the subject of a Medical Thesis, As it is the cause of many complaints which the physician must battle with & he cannot too strongly represent to patients the danger of using the drug in unnecessary cases.

Before we finish we would like to notice another preparation of Opium "McMunns Elixir" It appears to possess all the properties claimed by it. And does not leave unpleasant effects after its exhibition. As an Euthanasial remedy it is unrivalled. The only objection to its use by the Faculty, might be, that it is a secret remedy, still that does not impair its qualities.

J M Gilbert

An
Inaugural dissertation
on
Chemistry
Submitted to the examination
of the
Provost Regents and Faculty of Physic
of the
University of Maryland
for the degree of.
Doctor of Medicine
by
Robert Dyson.
of Charles Co.
Maryland.
Anno Domini. M D C C C L.

Scribendi recte, sapere est: et principium, et fons. — The art of good writing, has never been more clearly and succinctly pronounced than in the energetic language of one of the most elegant of classic poets. "Whoever thoroughly understands and successfully practices an art, is fully competent to teach it." Hence, the comprehensive rule, of the author, from whom I quote. Confident of the correctness of his idea, with regard to good writing, I am induced to offer, as an apology, for whatever errors may be committed in my thesis, either in phraseology or accuracy of opinion, the want of proper information. No one can be more convinced than I, of the importance of a thorough, scientific investigation of the several departments of the profes-

-sion of medicine, prior, to their en-
-gaging in the practice of the art.
Notwithstanding, I fear, that in pre-
-senting this thesis, I shall bring
against myself, an imputation
from which, I would fain be free.
viz: that of insufficiency.

It has been said, by a learned
author, that mans own existence
is the cause of all diseases, and
their remedy, death. However
true literally, that may be, it
cannot be allowed without qual
-ification. It is conceded, that man
is the most perfect of the Cre-
-ators handiwork; if so, then why,
should it be incompatible with
his existence, to live free from
disease, until, by the universal
law which governs nature, he
should give place to other gen
-erations. The lower orders of
animals, in common with man,

and the rest of the organized world, shared the penalty of man's first dis-obedience; they are generated, grow and flourish, for a season, and then, in consequence, of the immutable law, which governs matter, they decay and die; Yet, they are not like man, the constant sub-jects of disease. It is true, they are not entirely exempt from it. But they are, so far, as their own existence is concerned; that is, were there no disturbing causes. And so would man, but so, every day's experience proves him not to be; he is in reality heir of disease and death: Therefore, ~~th~~ the necessity, of an instrument, powerful to relieve the one, and stay the other. That instrument is medicine, and the moving power is the scientific and skilful physician.—

I have chosen, for my thesis, the science and art of Chemistry, as applicable to the wants and uses of the Medical profession. I am fully aware of the difficulty, of the subject; yet, I am the more willing to encounter it, and hope that my presumption will be pardoned. There is no branch of Medicine, so little studied, and so ill-appreciated, by the majority of Medical students; and I may say, by physicians themselves, as that of chemistry. But in my humble opinion, there is none, more deserving, of attention. They say, that the Materia Medica comprises, the names and properties of all the Medicines, describing their uses and the modes of preparing them. Then why, need we go any further? The theory and practice of Medicine, points

-out the existence, causes and na-
-ture of diseases, and the uses of rem-
-edies, and their application to them.
Anatomy and physiology show
the structure and functions of
organic life, and the relations
of the seperate parts, to the whole.
Obstetricy furnishes the means,
of obviating and mitigating the
pain and danger, which nature
has bequeathed to child-bearing;
And Surgery, with its bold and
triumphant hand, gives the abil
-ity, to obviate deformity, and
ameliorate distress. Being pretty
well posted, in these several de-
partments; the student genera
-ly, seems satisfied, with his
acquirements, and relishes not
the study of chemistry; which,
he would discover to be, were
his eyes opened, par excellence,
the great progressive science

-of this great progressive age.

In the first place, it is important to bear in mind, that however fashionable and fascinating theories may be, whether in medicine, politics or anything whatsoever; that, unless, they can be reduced to practice, and so adjusted, as to accomplish the ends which they propose; that they are mere hypotheses and as worthless, as the idle wind. It is well, known, that our profession, like most others, was attempted to be built upon a theoretical basis. Hence, the long and uncertain darkness, in which, it was involved.

In vain, did its votaries strive to establish a fabric whose foundation was liable to be tossed about, just as often, as one set of theories, could transplant another. And it was not until

-experimental facts undermined the whole system, of abstract theories and fixed themselves, as strong bulwarks, against the further invasion of fancy, that the medical profession emerged from the misty night which had so long enveloped it.

Chemistry is essentially the science of experiment, and no matter how feasible a certain set of reasonings may appear to be; it is not taken for doctrine, unless it can stand the test of direct experiment. Therefore, its applicability, to the medical profession as pointing out the only way, by which, correct knowledge can be obtained. Theory would just as soon assert, that oil and water would ultimately combine and form a new compound, as that hydrogen and oxygen would unite to form water.

But experiment proves the contrary. With equal plausibility it might be argued, that opium would produce hypercatharsis, or that the sulphate of magnesia would cause ptyalism, or that gum acacia would act as an escharotic. Experiment, however, shows their action to be the opposite. And thus, I might multiply absurdities, of that kind until I had exhausted the materia medica, and never find theory and facts to agree.

Experiment therefore, is the only way by which, we can know the action of medicine, upon the living system. Hence, the analogy between the science of chemistry and the practice of medicine. In the next place, we are to observe, that it is to the investigations of chemistry, that the physician owes many of the

-most wieldy and powerful weapons, that he possesses, for combatting some of the most insidious and obstinate diseases, he has to encounter. Query, may it not still further aid him, in finding out specifies for some of those dreadful maladies, which have heretofore baffled his skill and mocked his perseverance. There are no diseases, which have a more extensive area, and which affect more of the human family, than those produced by the poison of Malaria. And none, more amenable to treatment, since Chemistry has unfolded their antidote. The sulphate of quinia is now the universal sine qua non remedy, for all diseases, which owe their origin, to the action of Malarious poison. Were that the only medicine, which Chemistry afforded-

-to the physician, it alone would be sufficient to immortilize the art.

Physicians of the old school, may argue, if they please, that the crude peruvian bark is certain in its action and sufficient for all the ends, which its salt can accomplish. But we cannot see any reason to justify its indiscriminate use; when the comparatively infinitissimal dose of its active principle, will more decidedly and judiciously, meet our demands.

In pneumonia, that very distressing and dangerous disease, which respects neither climate, age nor sex; chemistry furnishes, except blood letting, almost the only curative means, which we possess; viz: tartras antimonii et potassæ, sulphate of morphia, and some of the hydrargeric compounds. Syphylis the scourge-

as well civilized as savage man: apart from the surgeon's aid, is indebted to chemistry for medicines which are employed, as its remedy. The most obstinate cutaneous affections frequently yield to the curative power of arsenic, when other means have proved unavailing. The introduction of poisonous drugs into the stomach will often not produce their mischief, if the sulphates of copper and zinc be timely administered. Arsenic itself, has an antidote, by the chemical compound, which is formed by the administration of the hydrated sesquioxide of iron.

The compounds of mercury, are capable of accomplishing more ends perhaps, than any other single class of medicines, in the materia medica. They act as cathartics, absorbents,

-alteratives, sialagogues &c. and hence, their applicability to a great variety of diseases. To their cathartic action, is added, their colagogue qualities, which render them invaluable, in the treat-ment of intermittent and remit-tent fever. It is acknowledged by physiologists, that they stimulate the biliary duct and exercise some spe-cific influence over the bile, secreting organ, the liver. And thus, if not specifics in those diseases, which have a tendency to vitiate and impede the functions of the biliary viscera. they at least, stimulate it to disgorge-ment, and tend to set up a new and more healthful circulation there-in. It is not within the province of my subject, to enter into a full exposition of the various uses and applications of the medicine, in ques-tion; but only to point out some of the most important diseases, in which

-it has been advantageously employed; thereby adding proof to proof, to the truth of the tenor of my thesis. I need only appeal to your experience, in common, with that of a large majority of practical and skilful physicians, to corroborate the correctness of my statements.

In the beginning of typhoid fever, if the gums are slightly acted on by calomel, blue mass, or some other convenient preparation of mercury, I believe in a majority of cases it will prove highly beneficial. Whether by establishing a new irritation, in a distant part, it invites the disease from the intestinal mucous follicles, I will not venture an opinion: but it certainly, seems to have some palliative agency. — — — —

In pleurisy, in consequence, of the effusion of plastic lymph, and when there is danger of adhesion, or when after adhesion has already taken place, we have no agent more likely to accomplish the absorbsion, and obliteration of the same, than some of the chemical compounds of mercury.

For the purpose of allaying inflammation, and soothing the minute capillary circulation, the preperations of mercury are more effectual in the treatment of pericarditis, endocarditis and peritonitis, than any other medicine in our possession. For promoting due absorbtion, creating healthy circulation in the capillaries, and other bloodvessels, and effecting salutary depletion of the system in dropsy; there is-

-no medicine is efficacious, and pro-
-motive, as the alterative doses of cal-
-omel, blue mass, or some other form
of mercury. And in inflammation
of the parenchyma of the liver, or
hepatitis; in exercising its triple ac-
-tion of depletive, or disgorgent, absor-
-bent, and alterative, scarcely the
epithet of triumphant, would be
too exaggerated to sound its
virtues. Rheumatism - the last
that I shall mention - is another
disease in which, calomel has a
most powerful detergent agency.
It should be exhibited in pur-
-gative doses. The compounds
of iodine are a valuable addition
, which chemistry has presented to
the Materia Medica. And doubt-
less it is yet to find out agents -
, which shall be hailed, as remedies
for some of those incurable Mal-
-adies, which now the physician.

-sees only to pity, and treats only to be disappointed.

The surgeon, likewise, can attest to the efficacy of the chemical art, in contributing to his skill in the treat-ment of traumatic inflammations, in furnishing the principal part of his salvatory antiphlogistic regimen, and in giving him a pro-phelactic for hydrophobia, and the disease arising from dissecting wounds; while the discovery of chloroform disrobes his art of many of its frightful terrors.

Many of the operations which are now performed with comfort and success, were before, attended with alarm, and embarrassment.

According to the statements made from statistical reports on the use of chloroform, offered by my pre-ceptor Dr Nathan R. Smith before the convention of physicians, held-

-at Boston Mass- in the spring of 1849; the average number of successful cases has been much increased, since chloroform has acquired the confidence of surgeons.

Obstetric practice also bears witness to its power, in relieving the excruciating pain, and warding off the alarming danger of difficult labour. Could those unfortunates whose afflictions have prompted their operators to administer to them the obliviating balm, testify in its behalf, they would with one harmonious voice echo the praise of that noble science, which produced so soothing a charm. Notwithstanding that, galvanism has been misused and abused by a certain class of empirics; it certainly does contribute not a little, to the aids of the profession. Many nervous-

-and inflammatory affections are mitigated by its application; and life itself, has often seemed to be recalled under its action; by setting up artificial respiration, when that function had been arrested. But galvanism is likely to do more.

It is maintained by many of the continental surgeons, that calculi in the urinary bladder can be broken down by its application, and in many instances, supersede the necessity for the operations of lithotomy, and lithotrity.

Experience has yet to prove the correctness of their statements.

It is not necessary for me to enumerate more instances, to corroborate my premises, and therefore I will stop, and rest satisfied with what I have done. After what I have said concerning

-the importance of an acquaintance with the science of chemistry, I need ask your indulgence, upon the score of my own inproficiency lest, that thinking me better posted than I really am, you might expect more of me, at my final examination than my limited knowledge will justify; And I must hope that my inefficiency, in that, as well as in the other branches of medical science, will be ascribed, not to a want of interest in, or conviction of their importance; and a desire to understand the same, But to the impossibility of crowding into one's mind, in a short time what should be, and only can be stored away pew a pew in a life time.

"What is writ, is writ, whoever thinks a faultless piece to see,
Thinks what never was, nor is, nor e'er shall be.

EXAMINED

INAUGURAL DISSERTATION

OF

INFLAMMATION.

submitted to the Examination

of the

PROVOST, REGENTS & FACULTY of the

of the

UNIVERSITY of MARYLAND,

for the Degree of DOCTOR of MEDICINE.

An

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INFLAMMATION,

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of the

PREVOST REGENTS & FACULTY OF PHYSIC

of the

UNIVERSITY OF MARYLAND,

for the Degree of DOCTOR OF MEDICINE

by

James H. Turner.

Dedicated
to
William Power, M. D.
Professor of Theory and Practice
in the
University of Maryland,
as a token of respect and esteem by
J. H. T.

Inflammation, derived from Inflammo, signifying - to burn - and is so called in consequence of the acute, burning pain, felt in the part affected.

As a general definition, it may be defined an irritation in a part of the body caused by some stimulus, in consequence of which blood flows into the capillary vessels in greater abundance than natural, and those vessels become over-dilated; whence result the phenomena which characterize this morbid condition, the pain, heat, redness and swelling - which symptoms vary according to the severity of the case, the structure, vital properties, and functions of the part affected, as well as the constitution of the individual. These symptoms have from the earliest ages been recognized as the signals of inflammation; but this feature of Pathology has been a subject of much dispute.

Galen thought it was produced by a

superabundance of what he termed the sanguineous humour.

Boerhaave attributed it to an obstruction of the small vessels or capillaries, occasioned by a Lentor of the blood; this condition of the blood he conceived was caused by a too profuse flow of any of the excretions – by heat, or the application of any other cause which would dissipate the thinner parts of the blood – but when the perspiration, urine, or any of the other excretions were suppressed, then the capillaries became so much distended as to allow the thicker parts of the blood to enter, thereby causing a more permanent obstruction: this he termed an "Error Loci".

The first cause of Inflammation given by this Writer, (that which relates to Viscidity) I conceive could hardly support the phenomena that succeeds in a local affection, for it would be more likely to affect the system generally, since the whole mass of

blood must be supposed to be in the same condition. There seems to be more probability in the other "Error Loci"; for it is a fact that in Inflammation, red blood enters vessels which in a state of health circulated only colourless fluid.

On this subject Medical opinions show that as the humoral pathology declined, these opinions gave way – although in many cases the phenomenon was very ingeniously explained. Improvements were continually attempted as the science progressed, & one was advanced by Stahl and Hoffman, bringing into account the influence of the Nervous system on the capillaries.

Coming down to more modern date, we find that Cullen admitted the obstruction maintained by Boerhaave, but denied the causes – "Error Loci & Lentor of the Blood". Taking advantage however of the hint of Stahl & Hoffman, he insisted on

the obstruction being caused by spasms of the extreme arteries. These Authors have been guilty of confounding cause and effect, for in placing a ligature on large vessels, which is of so frequent occurrence, we do not find that general Inflammation supervenes, which ought to take place if the doctrine of obstruction be correct: and again, the effusion that takes place in Inflammation of serous membranes, as in Pleurisy, &c could not be explained, if the doctrine of spasms were admitted.

Vecca differed in his opinion. He thought the first or primary step in the process was debility of the capillaries, which allowed of their dilatation - and with his followers seemed fully satisfied with this view, from the fact that the phenomena were so easily explained - pain, heat, redness & swelling being caused by the accumulation of blood in the dilated vessels. This doctrine is also

objected to, for if the blood were stagnated as would seem from this, the colour of the inflamed part ought to be dark like that of venous blood; whereas, we know the contrary of this to be true - it being bright and florid except in particular cases when it may be accounted for - and if dilatation or enlargement imply debility, then blushing the turgescence of the glands, &c, must be considered the effects or indication of debility.

Hunter in defining Inflammation, says it is simply an increased action of the vessels, which give rise to the phenomena that succeeds.

As the secretory and various other important actions which suffer derangement during inflammation, depend in their healthy state upon the nervous energy and powers of life, and as all efforts have proved insufficient to approach the truth more nearly in their explanation

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than by referring them to their source, we must be satisfied with doing the same in their morbid derangements. Being thus obliged to admit as the essence of inflammation, disturbance of the nervous energy of the part; may we not employ it also to account for the changes observed in the circulation, which have otherwise never been satisfactorily explained? – the various local determinations plainly proving that the motions of the blood are not entirely under the control of the heart.

Since Harvey's brilliant discovery of the circulation, Physiologists have found it necessary to take into account some other motive power besides the heart; and if we allow that the motion of the blood through the capillaries is influenced by the vital power of the vessels, the explanation of all the phenomena is easy & obvious.

May not Inflammation properly be defined an irritation occasioned by some stimulus

owing to which the healthy condition of the capillaries become changed, and the blood flowing into them in greater abundance than natural, they become distended, or over-dilated - whence result the pain, heat, redness and swelling.

Having thus given the views of different Authors, sufficient to shew the variety of opinion on this highly important and most interesting morbid condition, and the one which most cordially meets my own views, I am now led to consider the causes which act in producing and bringing about this morbid condition.

Causes.

The causes or circumstances which give rise to this morbid state are numerous & various. They may be divided into direct, or those which act immediately; and indirect, or those whose action is through the medium of the system. The direct causes, or local

irritations as they are usually called, embrace all the natural stimuli of action, whether excessive in degree or continuance; the various animal, vegetable and mineral substances, which by their effects, cause irritation, and every other sort of violence whether chemical or mechanical, which alters the structure of the body.

The effect of the cause varies, according to the irritability or tendency to excited action of the part or patient.

It is said that parts are generally irritable in proportion to their vascularity, "and Bichat observes that as inflammation is an affection of the capillary system of vessels, and appears to consist in an altered condition of their vital properties, with an inordinate sanguineous congestion; that hence the more abundant the capillaries of a part, the more liable is it to become inflamed." The mucous, serous, cellular and dermoid structures, being peculiarly

vascular, are much more frequently affected than are the osseous, cartilaginous and tendinous structures. There are many exceptions to this rule, for certain tissues are more under the influence of particular irritations than others. Parts sometimes become more irritable than usual – the circumstance of a previous attack of Inflammation is occasionally the cause – weakness or diminished power of action will produce the same effect – but the contrary of this is also produced by the habitual use or continued exposure to an irritation.

The differences observed in constitutional irritability are striking & important; at times seeming to depend on original or congenital peculiarities, and again frequently resulting from some injurious effect arising from impropriety in diet or exercise. The mind also is often connected with, or in other words has a powerful, controlling influence over the causes that

act in producing the morbid condition now under consideration; and impressions that are unheeded, are unfelt & inoperative.

In these different conditions of the system, it is not surprising that the same causes act differently, and produce such opposite effects: for while one individual may receive a severe wound, without its causing proportional sympathetic fever; another may die from the intense action lighted up in the system from a comparatively simple operation. There is an important fact relating to the effect of what might be deemed an irritating cause: viz. that it always proves inconsiderable, when any other cause that previously existed and produced the disturbance, is removed by it - and the success of surgical operations frequently depends on this principle.

The indirect causes, as before stated, are those which act through the medium of the system. They constitute a very interesting

and important subject of study; for while Nature has assigned to each organ its proper function and stimuli, whereby peculiar effects are produced; yet the whole are so intimately connected, that a deranged condition of one organ seldom exists, without causing a greater or less disturbance of the others. Sometimes, the entire system suffers from fever that results; and again, the disorder is local and confined to the part or parts affected. This fellow-suffering, whether partial or general, is usually expressed by the term "sympathy" and various explanations have been offered to account for it. To pursue these however, would (I conceive) not only be useless but unalled-for and foreign to the subject of this Thesis.

The Causes are also considered as predisposing and exciting — the predisposing, are those which prepare the system for disease — In some individuals there exists an hereditary predisposition to certain diseases, but

there is a distinguishing difference between susceptibility and predisposition. In one sense all persons are born with a predisposition to most forms of disorder - and Nature has protected no single individual against "Inflammation", when the causes come into play. Intemperate habits, improper diet, debility, fatigue, &c - are all predisposing causes - cold and violent exertion may be either predisposing or exciting causes - but the latter are generally considered those that act promptly in producing their effects, and are similar to the direct causes spoken of before.

Having thus in a general manner treated of the causes of Inflammation; the phenomena produced, viz. pain, heat, redness and swelling, naturally present themselves for our next consideration.

Turn over.

Phenomena.

Although inflammation is characterized by pain, heat, redness and swelling, yet no one of these is to be regarded as strictly essential to the existence of this morbid condition - each of these phenomenon being greatly diversified in character, according to the nature of the structure in which inflammation is located.

In considering these symptoms separately, we may notice 1st. Pain, which though generally present, is not always so - varying in different cases both in degree & kind. It is felt Ceteris Paribus by different persons according to their natural sensibility.

The kind of pain also varies according to the nature of the structure. In mucous membranes and skin, it is pricking tingling, burning and stinging as in Erysipelas. In serous membranes it is sharp, lancinating and extremely acute as in Pleurisy, Peritonitis, &c. In ligamentous or fibrous structures

tures, it is a dull, aching, throbbing, obtuse pain as in Rheumatism — and in the nerves, rapid, darting and excruciatingly severe as in Neuralgia. Thus we find that pain varies according to the nature of the structure where inflammation exists.

Pain is supposed to be caused by the swelling that occurs, by which pressure is made upon the extremities of the nerves; and for this reason, the most compact and unyielding tissues cause most pain — but though this may be a general rule, it is not altogether satisfactory, for pain certainly does exist in cases where there is no appreciable swelling, even in structures which readily yield to it. The degree of Pain therefore doubtless depends on the implication of the nerves in the diseased process.

Heat, which next presents itself for consideration, is a very characteristic symptom, and together with the redness has no doubt led to the choice of a title in expressing it. Boer-

haave imagined that this symptom depended on the friction of the red globules against the sides of the vessels, and that in inflamed parts, the friction was greatly increased by the obstruction that existed: but this, with his theory of the cause has long since exploded.

It is presumed that the increase of Heat mainly depends upon the increased influx of blood into the part affected – and possibly some vital action taking place under inflammation tends to develope it. Like pain, the degree of heat varies with the nature of the structure, but is most severe in the skin and mucous membranes.

It was formerly thought that the feeling of heat depended on a real and proportionate elevation of temperature, but John Hunter proved this opinion to be incorrect. By investigation and experiments he came to the following conclusions – 1st. That the heat of an inflamed part was not commensurate with the feelings of the patient. 2nd. That

it does not exceed the natural standard of heat at the centre of circulation. 3rd That the greatest increase of heat takes place in those parts which are farthest from the centre.

Redness, is owing to the distention of the vessels which convey red blood – to its being admitted into those vessels which usually only convey the colourless part of it – and also to the effusion into the interstices of the structure concerned. There is variety also in the tint of redness in inflammation: it, depending on the kind and degree of Inflammation as well as nature of the structure. Sometimes it is bright and vivid, as if the parts were full of arterial blood: – this generally happens in the earlier stages and more acute forms of disease. At other times it is dark livid or purplish, as if the parts were gorged with venous blood: – this generally occurs in the chronic or sluggish forms of the disease. The redness is either circumscribed, or in patches, or diffused in a general blush over a considerable space.

Swelling; This symptom has been erroneously ascribed to the expanded state of the blood from increased heat, but as has already been proven, the blood of an inflamed part is no hotter than that which flows from the heart, and supposing it were a few degrees hotter, this could scarcely produce the swelling. It appears to be owing to the increased quantity of blood in the part affected, and the effusion of fluid in surrounding cellular tissues. It consequently varies with the vascularity and laxity of the inflamed tissue.

Inflammation has several termenations, but as this term has not given universal satisfaction, Dr. Watson thinks the "events of inflammation" is an expression not open to the same cavil. They are Resolution, Metastasis, Deletescence, Effusion, Ulceration and Mortification. I shall not enter into a minute description of these "events" separately, as it appears wholly unnecessary, the name of each sufficiently expressing their several results.

Treatment, next presents itself for consideration, and having endeavoured throughout to view the subject in a general manner, we will on this point also only notice it as presented on general principles – and as Resolution is certainly the most favourable "Event" to which this disease can be brought, it will be our object and endeavour, if possible, to make it terminate in this way. The first and most important object with this view is to remove the existing cause, if it still continues to act. When the cause is direct, this can more easily be accomplished – sometimes however not without surgical interference: but when the cause is of an indirect character, the process of removal is more difficult and tedious; requiring a careful administration of Medicine, and strict attention to regimen.

The symptoms of Inflammation very naturally suggest the propriety of blood-letting; accordingly this has been styled its great

antidote. Venæsection may be accomplished in several different ways - either by phlebotomy or arteriotomy as a general means - Locally, blood may be taken by scarifying, cupping or leeching.

Purgatives perform an active part in the treatment of this disease. By their action a more vigorous secretion is set up throughout the intestinal canal, and an increased vermicular action takes place, by which double operation the stomach and intestines are freed from any accumulated fæces or other matters, which by their bulk or acrimony might prove irritating - and in this way the patient is relieved not only by the act of metastasis, but the secretions are frequently restored, the suppression of which is not unfrequently the cause of disease. Of the many purgatives given, Calomel and Salines appear to act best - the salines by their action induce a copious secretion from the entire surface of the canal, while calomel seems to have

a more specific action on the Liver and secreting organs generally.

Diaphoretics are also remedies which by their action on the skin bear a similar resemblance to purgatives on the mucous membranes of the intestines, by increasing the action of the skin – they are beneficial either in the way of Metastasis or in removing the cause by restoring the secretions which may have been suppressed. Like the last-named remedy they are numerous – the best however are Ipecac & Antimony given in small and oft-repeated doses, so as to keep up a constant nausea. The warm-bath is also a powerful diaphoretic – either as the Semicupium or hip-bath – the Pediluvium or foot-bath – and still more so in the form of fomentations.

Anodynes are useful in their soothing tendency, and without causing any real diminution in the powers of life, produce a temporary indisposition for action. Of these, the most useful are Opium and its various preparations,

arations,- Hyoscyamus, Cicuta & Prussic Acid.

Astringents are most generally used as external applications. There effects are somewhat similar to those last mentioned - the best are Cold. Acet. Plumbi and Nit. Silver.

Counter Irritants are also used as remedies- they act as revulsives on the principle of Metastasis. The action excited is various as to degree and duration - The most gentle are called Rubefacients, of which are Mustard, Ammonia, Turpentine and Camphor - also, some of the mineral acids. The more powerful are called Blisters or Vesicatories, of which Cantharides is most frequently used. Another mode of using Counter Irritation, is by Seatons, Issues, Moxas, &c.

Here I will close my remarks on this highly important and deeply interesting subject.

"Important & interesting says Dr. Watson, because it must necessarily occupy a large share of attention both from Physician and Surgeon." In nine cases out of ten, the first

question that proposes itself on being summoned to a patient, is "have we inflammation here?" In the practice of Medicine, it is the object of continual treatment & watchful care. Its effects are felt in all parts that are supplied with blood-vessels; and as before stated, are various. It is more easily excited by external causes, and therefore of more frequent occurrence than any other special disease – in fact, the great majority of diseases to which Man is liable, is in some way or other connected with it. Most of the organic lesions that take place recognize it either as the cause, or lead to it ~~either~~ as their effect – and indeed a large share of the premature extinction of life is attributable to it. Again, inflammation is interesting not only in its morbid phenomena and destructive consequences, but also in its healing tendencies. It is by this that wounds are healed – fractures repaired – that parts adhere together when adhesion is essential to life – that foreign and hurtful matters are safely conveyed out of

the body: A cut finger and a deep wound alike require inflammation to re-unite the divided parts. If ulceration occur in the stomach and bowels, threatening to penetrate through them, inflammation will often provide against the danger. If an abscess form in the liver, or a calculi in the gall-bladder, how are they to be removed? Should they make their way to the external surface as they always have a tendency, they enter the cavity of the peritonaeum and excite fatal peritonitis - but by inflammation, adhesions take place to the walls of the abdomen on the one hand, and the intestine on the other, so that the one may be opened externally - the other may pass out safely by the bowels.

If mortification of the foot takes place or it is killed by exposure to cold, inflammation, if not anticipated by the knife of the surgeon, will frequently remove the dead and useless part. This is denominated the curative properties of inflammation - and certainly this

process, which may either save or destroy life, renders it both important & interesting.

But this is not all — The salutary effects spoken of, are such as nature only conducts — In many instances we are able to direct and control its effects — to excite it at pleasure, and having excited it, in a great measure to regulate its course — and for these reasons, in skilful hands, it is often made an instrument of cure. For this purpose the surgeon after the operation for Hydrocele, wilfully excites inflammation in the tunica vaginalis to obliterate its cavity and thus prevent the accumulation of fluid. By the same agent, he is able to remedy many afflicting deformities such as Hare-lip, Fissured-palate, and that still more brilliant operation, the Rhinoplastic, which has of late been so successfully performed. It is then for these combined reasons, that Inflammation is rendered such an important and interesting subject for careful investigation and study.

Gentlemen.

In treating of the subject before you, it has been my object throughout to give the views of those Authors only, which have been and still are considered the best; whose works are standard, and whose abilities for the investigation of disease, are unquestionable.

I have not attempted to advance any new, imaginative theory which may have presented itself to my mind, feeling assured nothing of this kind was required at my hands; and being also fully sensible of my inability as well as of the impossibility for me, but a Student, to prove from experience and investigation any such theory.

I therefore Gentlemen submit this thesis for your examination, hoping to receive at your hands that leniency of Criticism, which I am sensible the effort requires.

Jan.y 1847.

An Inaugural Dissertation

on

Acute Gastritis

Submitted

to the examination

of the Provost Regents and Faculty

of Physic

of the University of Maryland

for the degree of Doctor of

Medicine

by

Warren W. Ward

of

Plymouth North Carolina

The human Stomach destined as it is to receive not only the aliments which a bountiful Providence furnishes for the natural wants of man, but at the same time compelled to receive and digest a vast variety of substances which an artificial state of society has rendered apparently necessary — and added to all this the heterogeneous assemblage of condiments, stimulants, and things of like nature, which follow in the train of luxury, and forced into its Cavity — might naturally be supposed to be, of all organs in the system the one most susceptible of inflammatory action. It is questionable however, after all whether the mucous coat

of the organ now under-consid=
=eration is more prone to inflamm=
=ation than some other parts of
the human system, for instance
the lungs or peritoneum, yet
the disease is of sufficient
frequency to make its consideration
a matter of primary importance
to the therapeutist, and as it is
seated in an organ so all imp=
=ortant, it is of the very first
consequence, that the practitioner
be guided by the soundest
principles of medical science
when he undertakes its man=
=agement.

An organ that performs
so important a function, as that
of receiving and elaborating the
food which is to support the

whole system, and which brings into action such a variety of sympathies, cannot be thrown into any considerable degree of unhealthy action, much less can it be invaded by inflammation, without its constituting a disease of the gravest character.

The disease now under consideration usually termed Acute Gastritis, by which I mean acute inflammation of the mucous membrane of the stomach, is most frequently ushered in with violent vomiting, and sometimes purging, and a peculiar burning pain in the epigastrium, great tenderness in this region is one of the most constantly attending symtoms, though not invariably present.—

Vomiting attended by pain in the effort, is a symtom usually present, and which is aggravated by the use of warm or stimulating fluids, ins= =atiable thirst for cold drinks, is hardly ever absent, In all cases of intestinal inflammation the patient labours under great dejection of spirits, but most particularly is this true as regards inflammation of the Stomach, dispondency seams to claim the sufferer as her own, the sharp features, the contracted brow, but too plainly tell the sufferings of the inner man, and loudly proclaims that his is a mid ill at ease,

The tongue in this affection, is in the midest forms, covered with a slight, brown or

white fur, with redness of the edges, but in the graver cases, it becomes generally red, smooth, and shining, sometimes moist but more commonly dry, and glazed, vomiting immediately after any offending substances are swallowed serves to distinguish this disease from some others with which it may be confounded, and these offending substances are generally, every thing whether fluid or solid, with the exception of small quantities of mucilaginous drinks, iced water or ice —

The substances vomited up are often, only the fluids just swallowed, mixed with some of the depraved, secretions of the stomach, but sometimes

accompanied with the contents of the duodenum, and when the ductus communis choledocus, or the liver itself is irritated, large quantities of bile is vomited up.

The pulse in the commencement of Gastritis, is usually moderately full, though rarely attended with that bounding fullness, and firmness which it has in some other inflammations, such for instance as Pleurisy or peritonitis, as the disease advances even this moderate fullness is lost, and the pulse becomes ~~quick~~ contracted quick and tense, and finally, very soft and frequent, and nearly imperceptible.

Gastritis may be distinguished

from Peritonitis by the appearance of the tongue, and by the irritable state of the stomach, tenderness on pressure of course cannot be considered a distin= =guishing symtom, as that exist in an eminent degree in Peritonitis.

The cause of inflam= =mation of the Stomach are various, among them we may enumerate, substances of an acrid, or irritating nature, received into the stomach. Sudden suppression of the function of the skin, either by drinking, immoderately of cold water, or by exposure to a current of cold air while the body is heated, unholesom and indigestible articles

of food, eating while the stomach is in a disorded state may also prove a cause of this disease.

This affection invading as it does an organ so all important, an organ upon whose healthy action, the health of the whole system depends, should be met by treatment at once promptly and energetic, for if it be allowed to pursue its course unchecked by proper medical treatment, it is more than apt to terminate fatally.

In most cases where the arterial action is high, and the other symptoms such as pain tenderness on pressure and the like, indicating a considerable degree of inflam=

=matory action - Venesection must be resorted to and carried to an extent sufficient to make an apparent impression on the system, either by lessening the force of the circulation, or by allaying the pain in a greater or less degree,

The next remedy to be used and and a most important one, is topical bloodletting, this can be effected either by leeching or cupping, the former should be preferred when the leeches can be procured, especially when there is much tenderness of the epigastrium, cupping however answers a very good purpose, and where the tenderness is not particularly great, may be used

to a considerable advantage, the venesection must be repeated if the reaction is considerable and the pain and other symptoms, are not materially abated, this latter remedy however must not be carried to such an extent, as will endanger the prostration of the patient, and should be used alone if there is doubt as to the effect of the further employment of the general remedy.

Emolient poultices, properly managed so as not to oppress, or otherwise incommode the patient, are capable of affording great comfort, and tend very much to abate the force of the disease – When topical bleeding either by leeching or cupping is carried to a sufficient extent,

that is to say when we think a further loss of blood would be imp=
=rudent a large blister should be applied to the epigastrium, to be followed by emolient applica=
=tions, the latter remedy is often very salutary in its effect, lessning pain, quieting restlessness, and sometimes changing every symtom for the better,

In the long catalogue of human maladies, not one perhaps demands more care in the administration of internal remedies than the disease under consideration, applied as they necessarily are to the very seat of the affection, they must be such as will not add a new irritation to an

organ already suffering so intensely - in truth during the first stage of the disease but little else is required, than cold drinks, ice and iced water, with mucilages and not even the latter unless they are acceptable to the stomach,

If there is constipation of the bowels, continuing so long that we apprehend mischief may ensue from the retained secre= =tions, we must resort to mild aperients, such as magnesia or Caster Oil, if even these are not borne well by the stomach, they must be at once abandoned, and the bowels unloaded by enemata, to be repeated from time to time as occasion may require, this remedy by freeing

the intestines from their vitiated contents, promote the healthy action of the secreting organs, and render the patient attogether more comfort= =able.

If after the foregoing remedies have been used, this disease dos not yield, Calomel in doses not sufficiently large to purge, but given with a view to its spe= =cific effect upon the system, is an excellent remedy, but this should ~~not~~ in most cases be given in combination with ~~another~~ remidy of equal and perhaps of paramount importance, I allude to opium - these two remidies, when given in comb= =ination, harmonize in their effects, the former by its specific

effects, proveing attrative and antiphlogistic, the latter by allay=
=ing pain and preventing any irritating effects from the calomel, taken together, properly continued, and closely watched, they constitute a most important curative means in this disease.

The mercurial should be used combined more or less with the opiet untill its attrative effects become aparent, when a marked improvement in the condition of the patient usually takes place;

In the use of Opium in Gastritis the dose must be varied according to circumstances, in those cases where the disease is nearly subdued, and where

there is but little pain and irritation, a quarter of a grain in combination with a grain of calomel, repeated once or twice a day answers very well but when the object is to allay irita=
=tion and pain, and thereby arrest the inflimation, the rem=
=idy must be given in full doses, and the system be kept constantly under its influence, one grain may be given, in combination, with calomel and repeated once in six or eight hours according to the exigencies of the case —,

The diet in the commencement of Gastritis must be absolute mucilaginous drinks forming the only exception,

and during convalescence great care must be observed to avoid stimulating articles of diet, those only are to be used which are light, uninitating, and digestible;

An
Inaugural dissertation
on
Necrosis
submitted to the examination
of the
Provost, Regents and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
by
Joseph Wilkins

Necrosis is a disease of the osseous system, in which by the effects of an inflammation of the bone, or of the periosteum, a portion of bone becomes deprived of its vital principle, and remains in the body a foreign substance.

This disease occurs generally either, to young persons; childhood and puberty being the periods most liable to it; or, to persons who labour hard, and are exposed to external injuries; but no age, mode of life, or condition is ex= =empt from it.

Every bone in the body is subject to necrosis, but the most super= =ficial, and those which enter into the formation of the extremities are more apt to be attacked by this disease, than those whose situation is deeper. The tibia, femur, humerus, fibula, radius, ulna, clavicle, and lower jaw are the

bones most frequently affected with necrosis. Generally one bone alone is affected, and at only one point, but it may attack the same bone in several distinct places, and may affect several bones at the same time. When the shaft of a cylin=drical bone is destroyed by necrosis, the disease rarely extends to the artic=ulations, for the shaft and epiphysis being developed from different centres of ossification, have consequently dif=ferent nutritive vessels; and as it is the destruction of these vessels, which is the essential cause of necrosis, the epiphyses generally remain unaffected.

There is nothing peculiar in the exciting causes of this disease, which are blows, injuries, the application of a low degree of temperature, and the other common exciting causes of inflammation. Concerning the

predisposing cause, there is a difference of opinion, some supposing it to depend upon the strumous diathesis, whilst others maintain, that the disease frequently occurs in patients who do not show any of the characteristic marks of the strumous diathesis, and who have never had any affection of the lymphatic system, but that it rather depends upon a cachectic state of the body, which interferes with the capillary circulation; the bones requiring for their nourishment, the full vigour of a healthy capillary circulation, any thing which interferes with this circulation, predisposes and renders them liable to the encroachments of disease.

The compact and unyielding structure of the bones, is when healthy almost devoid of sensibility, it is so

also, with the dense and fibrous perios=
=teum; but when these tissues are in=
=vaded by disease, they are the seat
of the keenest pangs; in the first stage
therefore of necrosis, when the periosteum
begins to inflame, the patient suffers
a great deal from severe pain, and
a sympathetic fever. This pain is less
severe, than that which is subsequently
felt when suppuration has taken
place, and when the pus is effused
under, and distends the inflamed
and highly sensitive periosteum.
At first, no pain is felt in the im=
=mediate vicinity of the inflamed
part, except when pressure is made
upon it, but the pain which is ex=
=perienced is located (supposing it
to be a limb which is affected) in
the nearest joint, this remains so
only for a few days, when the pain

changes its location, and establishes itself permanently in the part inflamed. It is this pain in the joint, which some=times causes this disease in its incipient stage to be mistaken for Rheumatism. It is a law of pathology, that irritation of one extremity of a nerve belonging to an organ, or tissue, which is not endowed with a high degree of sensi=bility, causes sympathetic sensations in the sentient extremities of other branches of the same nerve, or of communicating nerves; it is thus the pain being the principal symptom, upon which the opinion was based, that this error is made. This mistake however can hardly be made by one who has some little knowledge of the disease, and examines the patient with any degree of attention.

About the end of the first week

this inflammation terminates in sup=
puration, and the pus is effused under
the periosteum, and also within the
cavity of the bone, for the numerous
vessels which quit the periosteum to
descend into the substance of the bone,
and to ramify on the medullary
cells themselves, and freely anastomose
there, serve as a medium to conduct
the inflammation which was confined
at first only to the outside of the
bone, and cause it to penetrate more
deeply, and extend its ravages in
every direction. It is now, that the patient
suffers the most excruciating agony,
owing to the distension of the diseased
periosteum, and it is at this time,
that the injury is done to the bone,
which deprives it of its vital principle;
for the pus under the periosteum dis=
sects up this membrane from the

bone, which by rupturing all the nutritive vessels, passing from the periosteum, deprives the bone of all nourishment, and it consequently perishes. After remaining under the periosteum a short time, the pus ruptures it and escapes into the adjacent soft parts; when this happens, the severe pain and sympathetic fever subside partially, but do not leave the patient entirely. In the same manner, the internal collection of pus which first formed, between the bone and medul=lary membrane, ruptures this membrane and destroys the medullary substance. When the spongy bones are the seat of the disease, the inflammation proceeds as it does in the long bones, and the pus collects on both sides of the external lamella of compact bone, which covers the cancellated structure,

the cells of which are eventually destroyed, as the medullary substance is in the long bones.

After the pus has escaped from beneath the periosteum, it ulcerates its way through the soft parts, and forms ulcerated openings in the integu=ments, generally opposite to the necrosis but when, as sometimes happens, tendons, fascia, or aponeuroses intervene between the abscess and the integuments, the cellular tissue yielding, sinuses form, which sometimes run a vast distance from the seat of the disease. The edges of these ulcerated openings are bent inwards, and the granulations are either yellowish and pale, or else of an intense=ly red colour, they are also irregular, and generally not very tender, though sometimes extremely sensative, and bleed upon being slightly touched. These openings vary in

number according to the size of the seques-
trum, and when the whole cylinder of
bone is destroyed, they may occur on every
side of the limb. The sequestrum acting
as an extraneous body, prevents these sinuous
ulcers from healing, their edges become
callous, and they remain permanently
open.

After the rupture of the nutritive ves-
sels of the bone by the pus effused under
the periosteum, that portion of the bone
which was nourished by those vessels dies,
and becomes a foreign substance; when
nature, after some important preparatory
steps, commences her slow task of expelling
it from the system. Before the continuity
and strength of the bone are destroyed
by the dead becoming detached, or even
loosened from the living bone, lymph
is deposited in the muscles and tissues
surrounding the disease, which becoming

organised, forms a bony case, which embracing the dead bone, attaches itself to the ends of the live bone at the extremities of the sequestrum. Nature now commences, by a process which is analogous to ulceration in the soft parts, and which only takes place in the living bone, to detach the sequestrum, and being soon entirely separated, it remains loose in its bony case, completely enclosed by it, excepting certain apertures called cloacæ, through which the matter flows, and which remain open. These cloacæ, or apertures are commonly situated at the lower and lateral parts of the cavity, pass obliquely outwards, and communicate with the fistulous ulcers which open on the surface of the skin. They are of a round or oval shape, and their usual size is such as will just admit a quill.

The mode in which the formation of the cloacæ happens, is exceedingly obscure; but is owing most probably to some defect in the ossification. Their only office is to convey outwards the pus which col= =lects in the cavity of the bone, and the small fragments which separate from the sequestrum, and when the whole of the sequestrum is removed, they diminish and are at length totally obliterated.

As the new cylinder of bone does not closely embrace the seques= =trum, and as it overlaps the ends of the living bone, it feels considerably larger than the sound limb, but when the sequestrum has been re= =moved by nature, or art, the newly= =formed shell contracts, its cavity is abolished, and it gradually as= =sumes the shape, and functions of

the former bone.

A large majority of patients survive the attack, but it is after a long period of suffering, for when left to the unaided powers of nature, the disease may last a number of years; the patient also becomes emaciated, from the continued discharge of pus; this pus which is bland and mild when first secreted, on account of coming in contact with the atmospheric air, soon decomposes, and emits the most fetid odour, rendering the patient a nuisance both to him-self, and to his friends. When this disease proves fatal, it is either from the inflammatory fever which attends the commencement of the disease, and which is accompanied by exceedingly violent symptoms; or from another fever of a slow,

hectic type, which takes place in the decline of the disease. This is the effect of the long-continued profuse suppuration, which gradually reduces the patient, and at length brings him to the grave, unless the timely removal of the sequestrum is effected either by nature or art. The prognosis is also grave, when a joint is affected by the disease, extending to the epiphyses, or when necrosis of the tarsus, or carpus involve their respective joints.

Necrosis may be divided into three stages. The first stage may be considered as existing when the attack is recent, and the inflammation and its concomitant symptoms, the pain, the swelling, and the sympathetic fever prevail in a high degree, and when no suppuration has taken place, or at least no discharge

of matter. The second stage is that, in which the bone has lost its vitality, the callus is forming and hardening around it, and its separation from the live bone has commenced; it is indicated by a diminution of the inflammation, a partial subsidence of the swelling, and the discharge of purulent matter. The third stage is that, in which the sequestrum is entirely separated, when the dead bone can be felt by the finger, or probe, to be loose and free from all connexions.

In the treatment of necrosis, the first grand object is to prevent the loss of the vitality of the bone; the second, is to remove the sequestrum when the bone is dead and loose, and the callus has acquired sufficient strength. When, therefore the disease presents itself in the

first stage, the surgeon should examine the limb to discover the seat of the inflammation; as this is very painful when pressure is made upon it, it is readily ascertained. A free incision should then be made through the soft parts, and periosteum, completely down upon the bone; pledgets of lint should be placed in the wound to prevent it from closing too readily, and to make it heal by the second intention. This treatment combined with the antiphlogistic regimen, will generally be all that is required. Venesection, if indicated, should be practised with moderation, for should treatment be too late to save the vitality of the bone, the disease will then become long and wasting in its character,

and the patient's strength therefore should be husbanded with care.

If pus issues forth when the incision is made through the peri=osteum, the foregoing treatment will not be sufficient, for the inflamma=tion having been carried through the medium of the vessels to the inside of the bone, exhibits its ef=fects there about the same time that it does upon the outside, and when pus is discovered under the periosteum, it may be confidently asserted there is pus also within the cavity of the bone. This inter=nal collection of pus will still keep up the irritation, and even=tually destroy not only the bone, but the medullary substance; vent therefore must be given to this acumu=lation, and by taking out a button

of bone with a trephine, the pus has every chance of escaping.

During the second stage of necrosis, the sequestrum should not be disturbed, and only those symptoms treated which may distress the patient, or endanger his life.

When the last stage has arrived in which the dead is entirely detached from the living bone, and when dating from the point of time when the pus was discharged through the soft parts, a sufficient interval has elapsed to give strength to the investing callus, the seques= =trum should be removed.

A free incision should be made so as to expose the surface of the new case of bone; this should

be made where cloaca exist, and if this is not advisable on account of being too near the track of some important vessel or nerve, at a part where the bone is nearest the skin. The new bone must now be perforated, by some con=venient instrument, such as a trephine, Hey's saw, a strong pair of forceps, or if the bony case is very strong, a gouge and mallet, and if it can be, the sequestrum should be drawn out entire. If it cannot be extracted entire, it should be broken with a strong pair of bone forceps, and as much as possible drawn out piece-meal.

Sometimes portions of the sequestrum are confined in cells formed in the new bone, and they cannot be re=moved by the forceps. In this case

and in those cases, where an operation has been performed, and fragments are supposed to remain behind, the cavity should be syringed out daily with a lotion of nitric, or muriatic acid, which acting upon the insoluble phosphate of lime, of which the sequestrum principally consists, decomposes it, and forms the soluble nitrate, or muriate of lime; which is washed out by the syringing.

In those cases where the patients become exhausted by the excessive discharge, stimulating alteratives should be injected into the wound, tonics administered, and a nutritious diet allowed.

When a joint is affected by the extension of the disease, the constitutional disturbance is so great, that life is sometimes destroyed,

and the surgeon is generally obliged to amputate. This severe treatment is also necessary, when owing to the reduced state of the patient's health, the constitution cannot hold out during the whole time which would be requisite for the detachment of the sequestrum. In such a case as this, the amputation should be performed early in the disease, before the patient's constitution is completely broken down, therefore, the sooner it is performed, the more likely will it be for the operation to prove successful.

After the sequestrum is removed, owing to the callous state of the walls of the fistulous ulcers, and the pus not being able to escape with facility, they will not heal, but remain open;

when this is the case, they should be laid freely open, their callous walls destroyed by the caustic potassa, and the limb bandaged; their sides being thus brought into apposition, and a healthy action excited, they heal readily.

If any portion of the sequestrum remains, it will keep up a discharge in proportion to its size, but if the whole is re= =moved, the cure will be completed.

An inaugural dissertation
on
Laryngitis
Submitted to the examination
of the
Board of Regents
and
Faculty of Physic
of the
University of Maryland
for the degree of Doctor of Medicine
by
Louis White Morris
of
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Acute Laryngitis has been considered by some to be the most fatal of all the inflammations, it has proved rapidly fatal in a large proportion of the instances in which it has been known to occur.
It consists as its name implies, in inflammation of the parts composing the larynx; and especially of the mucous membrane that covers the laryngeal cartilages, including the epiglottis. The inflammation may be, and sometimes is partly limited to the larynx, but frequently it extends also to the posterior fauces, the velum palati, and the tonsils.

Laryngitis often begins with symptoms tonsillitis, difficulty of swallowing and fever, which is generally preceded by rigors. In this case the extension of the inflammation to the larynx, or of its establishment

in other cases is announced by hoarseness, a frequent husky, and sometimes convulsive cough, followed by tenderness pain, and constriction in the larynx itself, with difficult prolonged, and sonorous inspiration, the chest being free from signs of disease. On examination the fauces generally, but not always, are found red and swollen, and sometimes by pressing the tongue forward and downward, the epiglottis may be seen erect, thickened and of a bright or deep red colour. In this state the epiglottis no longer protects the glottis from the contact of matters passing into the pharynx, hence the act of swallowing not only is painful, but often causes convulsive fits of coughing, and increased difficulty of breathing. At first the fever is decidedly inflammatory, the face is flushed, the skin hot, and the pulse full and hard, but this state is soon changed unless the accompanying inflamma

of the obstructed state of respiration. A frightful train of symptoms then ensues, induced by the rapidly increasing impediment to the supply of air. The countenance becomes anxious in the extreme, and pale, the lips livid, the eyes staring and watery, the nostrils raised, the voice reduced to a whisper, the pulse becomes quicker feebler and less uniform. In this stage the sufferer seldoms sleeps for many moments at a time, when he begins to doze he starts up in a state of the utmost agitation gasping for breath, every muscle being brought into action which can assist respiration. The sufferer is quite exhausted, becomes delirious drowsy, and last comatose, the circulation being more and more languid he dies on the fourth or fifth day of the disease or even earlier, death has been known to take place even

hours after the attack, in some cases it has been delayed for two or three weeks.

This formidable malady has always existed, for we may trace examples of it, under various names, even in the writings of the ancients. But it is only in recent times that it has been singled out from the rest of the angina, and made a separate object of study. It has numbered some distinguished medical men among its victims: Dr David Pitcairn, Sir George Tuthill, Sir John Macnamara Hayes. The celebrated General Washington died of it.

Acute Laryngitis may follow exposure to cold and wet. It may originate in cynanche tonsillaris, or it may be brought on by swallowing scalding or corrosive liquid by the convulsive action which these excite in the throat, they are

in part thrown on, and some into the glottis, Mr Porter observes, that when a person attempts to drink by mistake a corrosive liquid a similar convulsive action takes place, closing the pharynx and throwing the offending matter violently backwards through the mouth and nostrils, under the epiglottis, and thus this accident becomes a cause of acute inflammation of the larynx. Mr Ryland has with good reason placed the inhalation of flame or of very hot air among the causes of acute inflammation of the larynx. Persons who die from severe burns, if it be only about the head and face, generally suffer from severe dyspnoea, and the mouth and larynx are found in a highly inflamed, and congested state; these effects he very rationally ascribes to the great heat of the air inhaled

at the moment of the conflagration. The inhalation of very acid vapours might probably have the same effect. It seems also not unfrequently in the course of chronic disease of the larynx, and is sometimes the cause of death in these cases.

Habitual intemperance, long course of mercury, frequent and long continued exertions of the voice, are supposed to predispose persons to attacks of laryngitis. Except in case of scarlatina, measles, and small-pox, and of the accidents before alluded to, laryngitis seldom if ever attacks children, and of those advanced in life. Dr Cheyne states that it most frequently occurs in such as are liable to indigestion connected with a disordered state of the liver. In most instances, the subjects of it have previously been liable to slight inflammation of those parts

The pathology of this terrible disease is extremely simple. The membrane covering the interior surface of the instrument of the voice suffers inflammation, one effect of inflammation in mucous membranes is a thickening of those membranes, they become turgid and swollen. Another frequent effect is the effusion of serous fluid in the subjacent areolar tissue. By such timid thickening of its lining membranes, the chink called the rima glottidis is narrowed, it is still further diminished in breathe, whenever the membrane is lifted and protruded by infiltration of the tissue beneath it, it is so nearly closed up, that air cannot pass inwards in sufficient quantity to sustain the vital functions, a small portion only of the blood returned to the lungs from the right side of the heart undergoes the requisite change from venous

to arterial. The miserable sufferer grows drowsy and delirious, and dies by a slow process of strangulation. If the rima glottidis becomes quite closed up, his sufferings, and his life are quickly at an end. The danger of a morbid charge may depend entirely upon its situation. It is so eminently with laryngitis. The inflammation is sometimes limited to a very small portion of membrane, if the same quantity and no more of the same membrane, a little lower down in the trachea, were inflamed in the same manner and degree, the complaint would be quite unimportant. Laryngitis derives all of its peril from the circumstance that the inflammation tends to shut up what may be called the gate of life. The part affected subserves two purposes, it is the organ of speech, and it forms a portion of the channel through

which air is conveyed from without into the lungs. Both of these purposes are impeded in this disease. Now the animal function of speech may be entirely, and permanently suspended without any danger to life. The function of respiration which though under the influence of the will, is an organic function, will not bear to be suspended even for a few minutes, and life cannot be long sustained when it is much impeded. Dyspnœa is a constant symptom, yet there are pauses of comparative ease and quiet, and there are period of severe aggravation and urgent distress. It is probable that the permanent narrowing of the chink by the inflammation and its consequences is from time to time increased by spasmodic contraction of the muscles that close the glottis. The difficulty of swallowing is a very

common symptom, yet it is not absolutely universal, for Mr Lauram describes a case in which it did not occur. It appears to depend in part upon the turgid and tender condition of the whole membrane which is common to the larynx and pharynx, and which is pressed upon as the larynx rises in the act of deglutition, but this symptom depends also and in a greater measure, upon the turgid state of the epiglottis.

The symptoms of acute laryngitis are generally sufficiently characteristic to separate it from other diseases affecting the breathing. The stridulous or hissing inspiration, heard most in the larynx, which is drawn down at each act, the seat of the sensation of pain, or the constriction at that part, often the visible condition of the epiglottis and the absence of pectoral

sings, suffice to distinguish it from diseases of the chest. It is easily distinguished from Cynanche tonsillaris by the stridor and peculiar dyspnœa which attend it. There may be difficulty of breathing in the latter disease from enormous swelling of the tonsils, but there such swelling will mostly be visible. In laryngitis the marks of inflammation to be seen on inspection of the fauces are generally slight and quite inadequate to explain the difficulty of swallowing. Again laryngitis is readily discriminated from pharyngitis, in which complaint there is great pain and difficulty in deglutition, but the breathing is quite free. In Croup the breathing is affected, but the swallowing is free. Laryngitis is distressing and alarming in its progress, and fatal in its termination. Of nine cases observed by Dr

Persons only three recovered. Of seven teen cases observed by Bayle only one recovered. Of twenty-eight cases collected from various authors by Ryland, two recovered which he considers to be above the average. It is said in most of the fatal cases, death took place before the fifth day. The prognosis must therefore in all cases be unfavourable, and the more so, as the disease has lasted longer and with progressive increase of the difficulty of breathing. When the face loses its colour or becomes livid, and the feet tips obtuse, from the circulation of black blood, the danger is extreme. On the other hand, decrease of the difficulty of breathing and of swallowing, a returning freedom of expectoration, with an improved expression and colour of the countenance, give rational hopes of recovery.

Treatment. In no disease is an early and energetic use of remedial measures more essential to their success, than in Acute Laryngitis. There is a period during which free blood-letting and the administration of Calomel and Antimony may arrest the inflammation before considerable effusion has taken place, but this period is very short, and has often elapsed before medical aid is resorted to, and when once the effusion has taken place, antiphlogistic measures becomes worse than useless, and unless artificial means of supplying air to the lungs be employed, the disease generally destroys life before there is time for ordinary curative measures, however energetic, to produce their effect.

The chief indications of treatment are 1st To prevent effusion by reducing

inflammatory action - 2nd Effusion having taken place, to prevent the obstruction which it causes to respiration from producing mortal injury to the functions - 3rd To promote the removal of the effused matter -

In endeavouring to fulfill the first indication by free blood-letting I cannot do better than quoting the direction of Dr Cheyne - He recommends free blood-letting but not to syncope, as advised by Dr Baillie, for this may deprive the patient of strength sufficient to struggle against the next spasmodic paroxysm of dyspnoea - Bleeding, to be serviceable, or safe must be performed early - There is, perhaps, no disease in which the fleeting opportunity, is more conspicuous than in this. When I say that we must bleed early if at all, I do not mean that we are to reckon so many days or hours from the comm

encement of the disease, but we must ascertain what progress it has made, for it travels sometimes at a rapid pace. We must look to our patient's actual condition. If there be high inflammatory fever present, and the skin is hot, the pulse firm and full, and the cheeks are red, and the lips florid, we may bleed our patient with decision and advantage, at the same time let the patient have a powder containing two or three grains of calomel, one-fourth or one-half-grain ~~tart~~ "tart," and one half or one-third of a grain of opium should be taken every three or fourth hour till the gums become affected. I would not hesitate to give double this quantity of calomel. But if his powers are beginning to sink under the poisonous influence of imperfectly aerated blood, if his skin be cold, or even cool, his face pale or leaden, his pulse small and feeble, his mind

wavering — we will do no good by blood-letting; nay, we will increase the debility which already exist, and hasten the fatal catastrophe —

With regard to local blood-letting, and to counter-irritation, there is one remark made by Dr Cheyne of some practical importance — It is a common practice, in affections of the throat, to apply leeches down or near the laryngeal cartilages, and afterwards to place a blister there — Now serous infiltration of the neighbouring parts often follows leech-bites, and the effect of a blister in producing serous effusion often extends beyond the skin; and the cartilages of the throat lie very near the surface, and it is possible that oedema of the glottis might be produced, or augmented, in consequence of these topical remedies — It would be better, therefore when we wish to take blood locally, to take it by cupping from the back

part of the neck, and when we desire to produce counter-irritation, it will be prudent to lay a blister on the upper part of the sternum, rather than to the front of the throat. Dr Cheyne also deprecates the use of tartar-emetic, powerful as that any is known to be in subduing inflammation of the mucous tissues. In the swollen and impliant state of the epiglottis it would not be prudent to excite, or to hazard, vomiting. The contents of the stomach passing upward would be apt to enter the unprotected larynx, and to cause hoarseness, distressing and even perilous attacks of suffocative cough.

Active depletory measures employed early may for a time relieve the symptoms without removing the inflammation, they often only delay the effusion, which with its resulting permanent increase of difficulty of breathing and appearance of lividity instead of taken place in the

first day may not come on for several days. Hence the importance of attempting, from the first appearance of the disease, to fulfil the third indication by the free use of mercury, both by Calomel internally and by external inunction. Some few cases have yielded to bleeding alone, and its employment should never be neglected when the strength can bear it, and the condition of the patient indicates it. But if the strength have already failed, and the undiminished dyspnoea and commencing lividity announced the approach of asphyxia, blood-letting becomes worse than useless, and the second indication by the operation of bronchotomy must then be attempted without delay. Dr Baillie considered it advisable to resort to bronchotomy if no considerable relief be obtained from other measures in thirty hours. Dr Cheyne more rationally

takes as a criterion the condition of the patient rather than the period, and says that if the symptoms be such as to contraindicate bleeding, and yet asphyxia is imminent, thirty minutes delay may be too long: but if the complexion is good and asphyxia not threatened, the operation may be delayed for twenty days. It is because we are convinced that it should be resorted to early, that we have included it in the second indication. If pre bleeding produce no relief, or be not borne, and serious difficulty of breathing have become established we would not wait for the appearance of pallor or lividity as recommended by Dr Cheyne, and still less for the lapse of a certain number of hours as proposed by Dr Baillie, but we would urge the performance of bronchotomy without delay. To defer the operation on account of the difficulty or danger